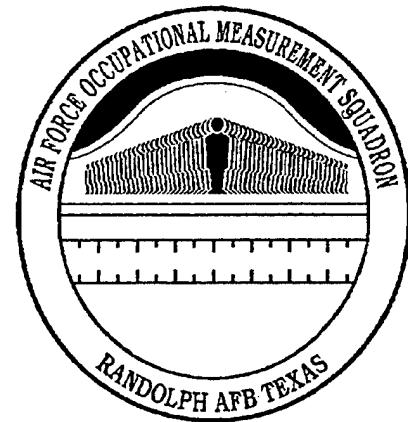


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AEROSPACE PROPULSION CAREER LADDER

AFSC 2A6X1A/B

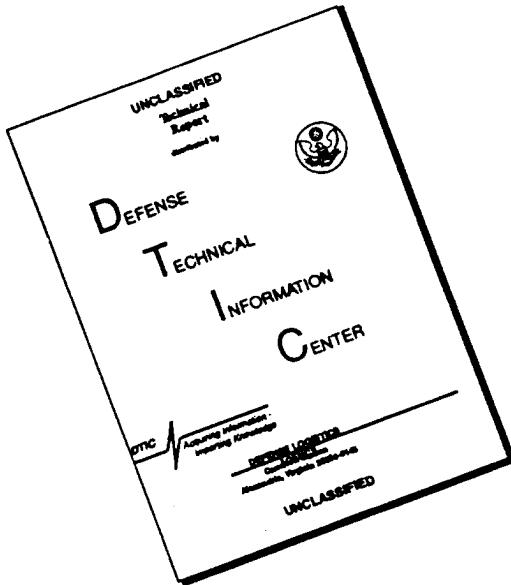
AFPT 90-2A6-045

SEPTEMBER 1996

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
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PREFACE

This report presents the results of an Air Force Occupational Survey of AFSC 2A6X1A/B, Aerospace Propulsion career ladder. Authority to conduct occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Mr. James T. "Tom" Duffy developed the survey instrument, analyzed the data, and wrote the final report. Lt Sheon H. Mendoza and Mr. Wayne J. Fruge provided computer programming support and Mr. Richard G. Ramos provided administrative support. Mr. Daniel E. Dreher, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS), reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB Texas 78150-4449 (DSN 487-6623).

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SUMMARY OF RESULTS

1. *Survey Coverage:* The Aerospace Propulsion career ladder, AFSCs 2A6X1A/B, was surveyed to gather data needed to evaluate the effectiveness of training within the Aerospace Propulsion specialties. The "A" shredout maintains jet engines on all assigned Air Force aircraft, and the "B" shredout maintains turboprop and turboshaft engines on aircraft and helicopters. In order to provide more engine specific training, three new shredouts were established for AFSC 2A6X1A, Aerospace Propulsion, Jet Engine. AFSC 2A631C will support conventional engines, AFSC 2A631D will support the F100 engine, and AFSC 2A631E will support the F110 engine. Survey results are based on responses from 6,729 Active Duty (4,245), Air Force Reserve (AFRES) (843), and Air National Guard (ANG) (1,641) personnel. Skill levels and paygrades were well represented for both shredouts.
2. *Career Ladder Structure:* Structure analysis identified 7 clusters and 13 jobs: Flightline Engine Maintenance Cluster, In-Shop Cluster, Test Cell Cluster, General Engine Maintenance Cluster, Nonpowered Engine Support Equipment (ESE)/Auxiliary Power Unit (APU)/Small Gas Turbine (SGT) Cluster, Supervisor Cluster, CAMS Cluster, Apprentice F100 Engine Maintenance Job, Cross Utilized Trained (CUT) Crew Chief Job, Inspection Job, Section NCOIC Job, Junior Turboprop Job, Modular Engine Repair Job, In-Shop Propeller Job, Flightline Expediter Job, Quality Assurance Inspector Job, Instructor Job, Material Support Job, Engine Management Job, and Equipment Management Job.
3. *Career Ladder Progression:* After completion of course J3AQR2A611-001, Aerospace Propulsion Fundamentals, jet engine personnel attend one of the following engine courses (based upon end assignment): J3ABR2A631C-001, Aerospace Propulsion Apprentice, Jet Engine (CONVL); J3ABR2A631D-007, Aerospace Propulsion Apprentice, Jet Engine (F100), or J3ABR2A631E-006, Aerospace Propulsion Apprentice, Jet Engine (F110). Turboprop/Turboshaft personnel attend course J3ABR2A631B-001, Aerospace Propulsion Apprentice, Turboprop/Turboshaft. AFSC 2A6X1A/B Active Duty career field personnel follow a normal career progression pattern that includes a decrease in technical task performance and an increase in supervisory performance at the 7-skill level. AFRES and ANG 2A6X1A/B 7-skill level career ladder personnel do not follow the normal career progression path as they remain highly technical in task performance. Active Duty 9-skill level personnel are the upper-level supervisors of these two AFSCs as AFSCs 2A6X1A and 2A6X1B merge at the 9-skill level. Nine-skill level AFRES and ANG Aerospace Propulsion personnel are the true supervisors in their respective AFSCs.
4. *Training Analysis:* Matched survey data to the AFSC 2A6X1A and 2A6X1B Specialty Training Standards (STS) revealed two documents well supported by survey respondents. The 2A6X1A STS had absolutely no performance-coded elements that were not supported by survey data, and the 2A6X1B STS had only one performance-coded element that was unsupported. Training personnel and career field managers are to be commended for producing STSs that are fully supported by the field. Analysis of the four 2A6X1A Plans of Instruction (POIs) and the

2A6X1B POI revealed that some performance-coded elements are not supported by survey data. Training personnel and subject-matter experts (SMEs) should review these documents and the Training Extract to determine if these elements warrant retention.

5. *Job Satisfaction Analysis*: Overall, AFSC 2A6X1A/B respondents from all three components appear quite satisfied with their jobs. When compared to other Mission Equipment Management AFSCs surveyed in 1995, AFSC 2A6X1A and 2A6X1B Active Duty members in the 1-48 months, 49-96 months, and 97+ months total active federal military service groups indicated about the same responses as those respondents in the comparative sample in job interest, perceived use of talents and training, sense of accomplishment, and reenlistment intentions.

6. *Implications*: AFMAN 36-2108 *Specialty Descriptions* for AFSC 2A6X1A/B career ladders are well supported by survey data. Training documents for both AFSCs are in great shape; however, some POI proficiency-coded elements need to be reviewed by Training personnel and SMEs, as they are not supported by survey data.

OCCUPATIONAL SURVEY REPORT (OSR)
AEROSPACE PROPULSION
(AFSC 2A6X1A/B)

INTRODUCTION

This is a report of an occupational survey of the Aerospace Propulsion career ladder, AFSC 2A6X1A/B, (the "A" shredout, hereafter referred to as shred, maintains jet engines on all assigned Air Force aircraft and the "B" shred maintains turboprop and turboshaft engines on aircraft and helicopters), conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS). To provide more engine specific training and maintenance, three new shreds were added to AFSC 2A6X1A at the 3-skill level. AFSC 2A631C will maintain conventional engines, AFSC 2A631D will maintain the F100 engine, and AFSC 2A631E will maintain the F110 engine. Unless otherwise specified, data for AFSC 2A6X1A will include the 3-skill level shreds. See Chart 1 for AFSC 2A6X1A/B skill-level progression. This survey will ensure current data for use in evaluating the effectiveness of training within the Aerospace Propulsion specialties. AFSC 2A6X1A/B personnel were last surveyed in 1988 (then AFSC 454X0A/B).

CHART 1
AFSC 2A6X1A/B SKILL-LEVEL PROGRESSION

<u>APPRENTICE</u>	<u>JOURNEYMAN</u>	<u>CRAFTSMAN</u>	<u>SUPERINTENDENT</u>
2A631 AEROSPACE PROPELLION	2A651 AEROSPACE PROPELLION	2A671 AEROSPACE PROPELLION	2A691 AEROSPACE PROPELLION
B TURBOPROP/ TURBOSHAFT	A JET ENGINES	A JET ENGINES	
C TF33 JET ENGINES	B TURBOPROP/ TURBOSHAFT	B TURBOPROP/ TURBOSHAFT	
D F100 JET ENG			
E F110 JET ENG			

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Background

According to the specialty descriptions in *AFSC 2A6X1A Career Field Education & Training Plan (CFETP)*, Aerospace Propulsion Superintendents/Chief Enlisted Managers superintend maintenance and staff activities in maintenance of aircraft systems, components, and associated ground support equipment. Aerospace Propulsion Jet Engine Craftsmen supervise, perform maintenance, and train personnel in jet engine maintenance. Aerospace Propulsion Jet Engine Apprentice and Journeymen maintain turbojet and turbofan jet engines at the organizational/intermediate level. Specialty Descriptions in the *AFSC 2A6X1B CFETP* state that Aerospace Propulsion Turboprop/Turboshaft Engine Craftsmen supervise, perform maintenance, and train personnel in engine/propeller maintenance, and Aerospace Propulsion Turboprop/Turboshaft Engine Apprentice and Journeymen maintain turboprop/turboshaft engines at the organizational and intermediate levels.

Initial 3-skill level training for AFSC 2A6X1A personnel is currently provided through two phases of instruction. First, personnel must complete course J3AQR2A611-001, Aerospace Propulsion Fundamentals, Jet Engine, and second, they attend one of the following courses based upon end assignment: J3ABR2A631C-001, Aerospace Propulsion Apprentice, Jet Engine (CONVL); J3ABR2A631D-007, Aerospace Propulsion apprentice, Jet Engine (F100), or J3ABR2A631E-006, Aerospace Propulsion Apprentice, Jet Engine (F110).

Course J3AQR2A611-001, Aerospace Propulsion Fundamentals, is 5 weeks in length and is taught at Sheppard AFB TX. This course covers quality awareness, occupational safety and health programs, hazardous environment, technical order system, jet engine theory, constructional features, general engine maintenance, core automated maintenance system (CAMS), supply responsibilities, and deficiency reporting system. This course also covers: engine system knowledge, inspection, and preventive maintenance; engine preservation and storage; special measuring tools; system removal and installation; and compressor (modular fan) maintenance.

Course J3ABR2A631C-001, Aerospace Propulsion Apprentice, Jet Engine (CONVL), primarily uses TF33 and TF39 engines and support equipment to teach technical orders, engine preparation, support equipment, preliminary maintenance procedures, CAMS, and standard base supply system. It also includes flightline maintenance procedures, engine removal and installation, fan section maintenance, removal and installation of engine plumbing, inspections, removal and installation of engine accessories, and rigid borescope operation. This course is 5 weeks in duration and is also conducted at Sheppard AFB TX.

Course J3ABR2A631D-007, Aerospace Propulsion Apprentice, Jet Engine (F100) uses F100-PW-100/200/220/229 series engines and support equipment to teach construction features, engine rigging, preliminary maintenance, gearbox and accessory removal, inspection, and installation. It also includes horizontal engine disassembly, inspection and assembly, servicing, removal and installation of the airframe mounted engine, and rigid borescoping. Taught at Sheppard AFB TX, this course is also 5 weeks in duration.

Course J3ABR2A631E-006, Aerospace Propulsion Apprentice, Jet Engine (F110) primarily uses F110-GE-100/129 series engines and support equipment to teach constructional features, engine rigging, preliminary maintenance procedures, engine servicing, augmenter and gearbox maintenance, removal and installation of accessories, and plumbing. It also includes low pressure compressor and turbine removal and installation, core engine maintenance, compressor inspection and automated maintenance system and standard base supply system. This course is also 5 weeks in duration and taught at Sheppard AFB TX.

Personnel entering into AFSC 2A6X1B attend course J3ABR2A631B-001 for 11 weeks at Sheppard AFB TX. This Aerospace Propulsion Apprentice Turboprop/Turboshaft course primarily uses T56/A-7A engines and support equipment to teach operation, removal, disassembly, inspection, repair, and test and installation of hydraulically operated propellers, controls and accessories. It also uses operating principles, engine change and adjustments, and conditioning of turboprop engine and systems. Disassembly, inspection, repair, and assembly of the turboprop engine are also included in the course.

Entry into AFSC 2A6X1A requires a General Armed Forces Vocational Aptitude Battery (ASVAB) score of Mechanical 44 and the Strength and Stamina requirement of "J" (lifting weight of 60 lbs). AFSC 2A6X1B entry requires a ASVAB score of Mechanical 57 and a "G" (lifting weight of 40 lbs) Strength and Stamina requirement.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI), AFPT 90-2A6-045, dated April 1995. A tentative task list was prepared after reviewing pertinent career ladder publications and directives and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 79 subject-matter experts (SMEs) at the following locations:

<u>BASE</u>	<u>REASON FOR VISIT</u>
Sheppard AFB TX	Technical Training School
Travis AFB CA	TF-33 and TF-39 Engines
Castle AFB CA	J57 and F108 Engines
Edwards AFB CA	F117 and F118, Engines
Nellis AFB NV	F100 Engines
Dyess AFB TX	F101 and T56 Engines
Little Rock AFB AR	T56 Engine and Propellers
Hill AFB UT	F110 Engine
Davis Monthan AFB AZ	TF34 and T56 Engines
Kirtland AFB NM	T400, T58, T64, and T700/700C Engines
Barksdale AFB LA	CF6 and TF33 Engines

Others contacted included Air Force functional and resource managers, major command (MAJCOM) representatives, and the career field training manager. The resulting JI contained a comprehensive listing of 873 tasks grouped under 18 duty headings, with a background section requesting such information as present job, functional area, component status, engines or small gas turbines maintained, aircraft performing engine maintenance on, support equipment used or operated, test equipment or special tools used or operated, and forms used. Also requested was information on grade, time in present job, time in service, time in career field, and job satisfaction indicators.

Survey Administration

From August 1995 through November 1995, base training offices at operational bases worldwide, Air Force Reserve (AFRES) and Air National Guard (ANG) units, administered the inventory to all eligible DAFSC 2A6X1A/B personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, 7-, and 9-skill level/CEM population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by Air Force Personnel Center (AFPC), Randolph Air Force Base TX.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task, compared to other tasks performed. The ratings ranged from 1 (very small amount time spent) to 9 (very large amount time spent).

To determine relative time spent for each task, all of the incumbent's ratings are assumed to account for 100 percent of time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time spent on each task.

Survey Sample

Selection criterion was utilized to ensure the survey sample represented an accurate representation across skill levels and paygrades. Table 1 reflects AFSC distribution in the survey sample by MAJCOM. Table 2 reflects the survey distribution by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall populations of each career ladder.

TABLE 1
ACTIVE DUTY
MAJCOM REPRESENTATION OF TOTAL SAMPLE

<u>COMMAND</u>	<u>AFSC 2A6X1A</u>		<u>AFSC 2A6X1B</u>	
	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AETC	9	8	10	6
ACC	34	34	45	43
AFMC	6	6	3	3
AMC	32	32	1	4
PACAF	11	13	9	11
USAFE	7	6	6	6
AFSOC	*	*	25	27
OTHER	*	*	*	0
 TOTAL ASSIGNED			AFSC 2A6X1A	AFSC 2A6X1B
TOTAL ELIGIBLE			5,398	1,203
TOTAL IN SAMPLE			4,969	1,111
PERCENT OF ASSIGNED IN SAMPLE			3,563	682
PERCENT OF ELIGIBLE IN SAMPLE			66%	57%
			71%	61%

* OTHER INCLUDES: EUR, US SOUTH, AND AF ELM
 ** AFSC 2A6X1A INCLUDES AFSC 2A691 AND C, D, AND E SHREDS

TABLE 1 (CONTINUED)
AFRES AND ANG
REPRESENTATION OF TOTAL SAMPLE

<u>COMMAND</u>	<u>AFSC 2A6X1A</u>		<u>AFSC 2A6X1B</u>	
	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AFRES	1,764	10	429	2
ANG	2,315	19	631	6

* AFSC 2A6X1A INCLUDES AFSC 2A691 AND C, D, AND E SHREDS

TABLE 2
ACTIVE DUTY
PAYGRADE DISTRIBUTION OF TOTAL SAMPLE

<u>PAYGRADE</u>	<u>AFSC 2A6X1A</u>		<u>AFSC 2A6X1B</u>	
	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-4	43	46	52	51
E-5	26	28	26	28
E-6	16	15	13	13
E-7	12	10	9	8
E-8	2	*	0	0
E-9	*	*	0	0

* INDICATES LESS THAN 1 PERCENT

** AFSC 2A6X1A INCLUDES AFSC 2A691 AND C, D, AND E SHREDS

TABLE 2 (CONTINUED)
AFRES
PAYGRADE DISTRIBUTION OF TOTAL SAMPLE

<u>PAYGRADE</u>	<u>AFSC 2A6X1A</u>		<u>AFSC 2A6X1B</u>	
	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-4	13	13	18	14
E-5	46	45	44	44
E-6	25	26	27	33
E-7	11	12	11	9
E-8	3	3	0	0
E-9	*	*	0	0

* INDICATES LESS THAN 1 PERCENT

** AFSC 2A6X1A INCLUDES AFSC 2A691 AND C, D, AND E SHREDS

TABLE 2 (CONTINUED)

ANG
PAYGRADE DISTRIBUTION OF TOTAL SAMPLE

<u>PAYGRADE</u>	<u>AFSC 2A6X1A</u>		<u>AFSC 2A6X1B</u>	
	PERCENT OF <u>ASSIGNED</u>	PERCENT OF <u>SAMPLE</u>	PERCENT OF <u>ASSIGNED</u>	PERCENT OF <u>SAMPLE</u>
E-1 to E-4	25	24	26	24
E-5	32	35	40	41
E-6	24	24	22	22
E-7	14	13	12	12
E-8	4	3	0	*
E-9	*	*	0	0

* INDICATES LESS THAN 1 PERCENT

** AFSC 2A6X1A INCLUDES AFSC 2A691

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 2A6X1A/B personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the JIs. This information is used in a number of analyses discussed in more detail within this report.

Training Emphasis (TE). Training emphasis is defined as the degree of emphasis that should be placed on each task for structured training of first-enlistment personnel. Structured training is defined as resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. One-hundred twenty-five experienced AFSC 2A6X1A (Active Duty, AFRES, and ANG) NCOs rated the tasks in the inventory on a 9-point scale ranging from 1 (extremely low) to 9 (extremely high training emphasis). Overall agreement among these raters was not acceptable, hence there is no TE rating for those tasks performed by AFSC 2A6X1A personnel. Numerous attempts were tried in an effort to establish acceptable rater agreement, but none could be achieved. However, overall agreement among the 92 AFSC 2A6X1B raters was acceptable.

The average TE rating for AFSC 2A6X1B is 1.91, with a standard deviation of 1.38. Tasks with a TE rating of 3.29 or greater are considered important to train new AFSC 2A6X1B personnel to perform.

Task Difficulty (TD). Task difficulty is defined as the amount of time needed to learn to perform each task satisfactorily. One-hundred eighteen experienced AFSC 2A6X1A/B (Active Duty, AFRES, and ANG) supervisors rated the difficulty of the tasks in the inventory using a 9-point scale ranging from 1 (extremely low difficulty) to 9 (extremely high difficulty). Interrater agreement among these respondents was extremely high. TD ratings are normally adjusted so tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00. Any task with a difficulty of 6.00 or greater is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting Air Force Specialty entry-level jobs.

CAREER LADDER STRUCTURE

The first step in the analysis process is to identify the structure of career ladders in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Program (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings.

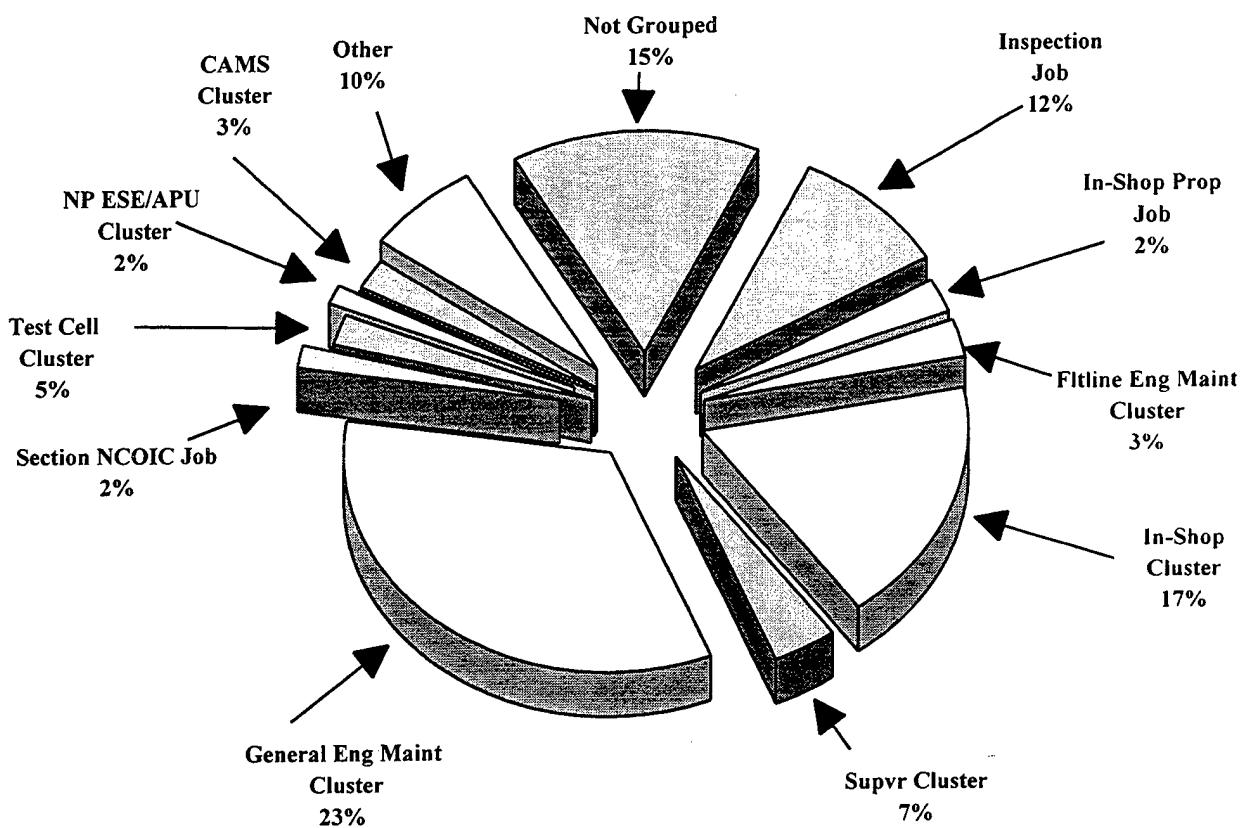
The basic group used in the hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a *Cluster*. The job structure resulting from this grouping process (the various jobs within the career ladder) can be used to evaluate the changes that have occurred in the AFSCs over the past 5 years. The above terminology will be used in the discussion of the AFSC 2A6X1A/B career ladder.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, 7 clusters and 13 jobs were identified within the surveyed career ladder. Figure 1 illustrates the jobs performed by AFSC 2A6X1A/B personnel. Active Duty, AFRES, and ANG members can be found in all clusters and jobs. Many of the same tasks are performed by Airmen in both

the "A" and "B" shreds. All basic duties revolve around the maintenance and repair of aircraft engines and nonpowered engine support equipment (ESE). Consequently, most clusters and jobs are identified by functional area instead of by shred. For example, the General Engine Maintenance Cluster contains members from both the "A" and "B" shreds, performing the same tasks, but on their respective engines. And naturally, those clusters and jobs that pertain to modular engines or afterburners/augmenters, do not contain members from the "B" shred, just as "A" shred members will not be found in the turboprop or propeller areas. Variations existed in all of the identified clusters, and they are defined as clearly identifiable functions within a cluster that are not broken out separately. These variations are listed as jobs in their respective cluster.

FIGURE 1
IDENTIFIED JOB STRUCTURE AND PERCENTAGES OF TOTAL SURVEY SAMPLE



Other includes: Apprentice F100 Engine Maint, CUT Crew Chief, Junior Turboprop Maint, Modular Engine Repair, Fitline Expediter, QA Inspector, Instructor, Material Support, Engine Management, and Equipment Management Jobs.

A listing of these clusters and jobs is provided below. The stage (STG) number shown beside each title references computer-printed information; the letter "N" represents the number of personnel in each group.

- I. APPRENTICE F100 ENGINE MAINTENANCE JOB (STG422, N=45)
- II. FLIGHTLINE ENGINE MAINTENANCE CLUSTER (STG346, N=166)
 - A. Nonafterburning Engine Job
 - B. Afterburning Engine Job
- III. CROSS UTILIZED TRAINED (CUT) CREW CHIEF JOB (STG387, N=81)
- IV. INSPECTION JOB (STG588, N=192)
- V. IN-SHOP CLUSTER (STG528, N=1216)
 - A. In-Shop TF Maintenance Job
 - B. In-Shop AB Engine Job
- VI. TEST CELL CLUSTER (STG444, N=267)
 - A. Test Cell Maintenance Job
 - B. Test Cell NCOIC Job
- VII. GENERAL ENGINE MAINTENANCE CLUSTER (STG586, N=2,247)
 - A. Flightline Maintenance Job
 - B. ANG/AFRES Maintenance Job
 - C. Turboprop Maintenance Job
 - D. Supervisors Job
- VIII. SECTION NCOIC JOB (STG281, N=124)
- IX. JUNIOR TURBOPROP MAINTENANCE JOB (STG432, N=65)
- X. CAMS CLUSTER (STG184, N=141)
 - A. CAMS Supervisors
 - B. CAMS Input Job
- XI. MODULAR ENGINE REPAIR JOB (STG600, N=33)

- XII. IN-SHOP PROPELLER JOB (STG226, N=103)
- XIII. NONPOWERED ENGINE SUPPORT EQUIPMENT (ESE)/AUXILIARY POWER UNIT (APU)/SMALL GAS TURBINE (SGT) CLUSTER (STG064, N=144)
 - A. APU/SGT Maintenance Job
 - B. Nonpowered ESE Maintenance Job
- XIV. FLIGHTLINE EXPEDITER JOB (STG551, N=21)
- XV. QUALITY ASSURANCE INSPECTOR JOB (STG140), N=98)
- XVI. SUPERVISOR CLUSTER (STG289, N=457)
 - A. Superintendent Job
 - B. Production Supervisor Job
- XVII. INSTRUCTOR JOB (STG074, N=60)
- XVIII. MATERIAL SUPPORT JOB (STG298, N=89)
- XIX. ENGINE MANAGEMENT JOB (STG309, N=68)
- XX. EQUIPMENT MANAGEMENT JOB (STG278, N=94)

The respondents forming these groups account for 85 percent of the survey sample. The remaining 15 percent were performing tasks which did not group with any of the other defined jobs. This percentage of respondents that did not group is due to the diversity of the 2A6X1A/B career ladder. Some of the job titles given by respondents who did not group, which were representative of these personnel include: TCTO Monitor, Dorm Manager, Retention NCO, Deployment Manager, and Safety NCO.

Group Descriptions

The following paragraphs contain brief descriptions of the 7 clusters and 13 jobs identified through the career ladder structure analysis. Appendix A lists representative tasks performed by identified cluster and job groups. Table 3 displays time spent on duties by career ladder jobs, while Table 4 provides Active Duty demographic information for each cluster and job discussed within this report. Tables 5 and 6 provide this same demographic information for AFRES and ANG groups.

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	APPRENT F100 MAINT JOB (STG422)	FLTLINE ENGINE MAINT CLUSTER (STG346)	CUT CREW CHIEF JOB (STG387)	INSPEC- TION JOB (STG588)	IN- SHOP CLUSTER (STG528)	TEST CELL CLUSTER (STG444)
A ORGANIZING AND PLANNING	*	1	1	1	2	3
B DIRECTING AND IMPLEMENTING	*	1	1	1	1	3
C EVALUATING AND INSPECTING	0	1	1	1	1	2
D TRAINING	*	1	1	1	1	2
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	2	1	2	2	3	4
F PERFORMING QUALITY ASSURANCE FUNCTIONS	1	2	2	3	2	2
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	86	63	48	78	69	59
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	0	*	*	*	*	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	1	14	8	4	2	2
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	0	*	*	*	0	0
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	7	1	*	2	13	*
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	0	0	0	*	*	0
M PERFORMING TEST CELL FUNCTIONS	*	*	0	*	1	17
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	0	4	7	3	*	*
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*	*	*	*	1	1
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	1	1	*	1	*	1
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	1	7	25	1	*	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS/CAMS FOR AIRLIFTERS FUNCTIONS)	*	3	3	1	3	3

* INDICATES LESS THAN 1 PERCENT

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	GENERAL ENGINE MAINT CLUSTER (STG586)	JUNIOR ENGINE SECTION JOB (STG281)	TURBO- PROP JOB (STG432)	CAMS JOB (STG184)	CLUSTER JOB (STG600)	MODULAR ENGINE REPAIR JOB (STG226)	IN- SHOP PROP JOB
A ORGANIZING AND PLANNING	2	10	*	4	1	1	2
B DIRECTING AND IMPLEMENTING	2	9	*	3	1	1	2
C EVALUATING AND INSPECTING	2	7	*	3	2	2	2
D TRAINING	2	7	*	2	1	1	2
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	2	5	1	3	3	3	4
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2	4	2	1	3	2	2
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	53	36	53	19	52	12	
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	4	*	17	1	0	30	
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	8	1	7	2	*	2	
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	1	*	4	*	0	5	
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	4	5	2	5	26	1	
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS ENGINES	1	*	3	2	0	28	
M PERFORMING TEST CELL FUNCTIONS	2	1	*	3	0	*	
N MAINTAINING AUXILIARY POWER UNITS (APUS) OR SMALL GAS TURBINE (SGT) ENGINES	4	2	2	3	0	*	
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1	2	*	10	1	1	
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	2	3	1	6	*	1	
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	4	*	4	2	*	1	
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS/CAMS FOR AIRLIFTERS FUNCTIONS)	3	7	3	30	8	4	

* INDICATES LESS THAN 1 PERCENT

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

<u>DUTIES</u>	<u>NONPOWER ESE/APU/ SGT CLUSTER (STG064)</u>	<u>FLTLINE EXPEDIT- ORS JOB (STG551)</u>	<u>QA INSPECTOR JOB (STG140)</u>	<u>SUPER- VISORS CLUSTER (STG289)</u>	<u>INSTRUCT- OR JOB (STG074)</u>	<u>MATERIAL SUPPORT JOB (STG298)</u>
A ORGANIZING AND PLANNING	5	49	10	23	9	14
B DIRECTING AND IMPLEMENTING	4	25	6	20	8	13
C EVALUATING AND INSPECTING	3	12	21	18	8	10
D TRAINING	3	*	4	9	51	6
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	9	2	6	6	9	38
F PERFORMING QUALITY ASSURANCE FUNCTIONS	3	2	26	5	3	3
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	12	2	16	7	7	6
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	0	*	*	*	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	1	1	1	1	*	*
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	1	0	*	*	0	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	7	0	1	*	*	1
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*	0	*	*	0	*
M PERFORMING TEST CELL FUNCTIONS	1	0	1	*	*	*
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	12	0	1	*	0	*
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1	1	1	5	*	1
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	28	0	1	*	1	*
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	*	2	1	1	*	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS/CAMS FOR AIRLIFTERS FUNCTIONS)	11	3	3	4	5	6

* INDICATES LESS THAN 1 PERCENT

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

<u>DUTIES</u>	ENGINE MANAGEMENT JOB (STG309)	EQUIPMENT MANAGEMENT JOB (STG278)
A ORGANIZING AND PLANNING	7	6
B DIRECTING AND IMPLEMENTING	7	5
C EVALUATING AND INSPECTING	4	2
D TRAINING	3	2
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	5	69
F PERFORMING QUALITY ASSURANCE FUNCTIONS	1	3
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	2	2
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	0	0
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	*	*
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	0	0
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	*	*
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	0	0
M PERFORMING TEST CELL FUNCTIONS	*	0
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	0	0
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	55	*
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	0	2
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	*	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS/CAMS FOR AIRLIFTERS FUNCTIONS)	15	8

* INDICATES LESS THAN 1 PERCENT

TABLE 4

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ACTIVE DUTY)

	APPRENT F100	FLTLINE ENGINE	CUT CREW	INSPEC- TION	IN- SHOP	TEST CELL
	MAINT JOB	MAINT CLUSTER (STG346)	CHIEF JOB	JOB (STG387)	CLUSTER (STG528)	CLUSTER (STG444)
TOTAL NUMBER IN GROUP	45	166	81	192	1,216	267
ACTIVE DUTY IN GROUP	29	135	65	85	680	220
DAFSC DISTRIBUTION						
2A631C	14%	25%	33%	35%	17%	5%
2A631D	62%	2%	0	0	9%	3%
2A631E	7%	3%	0	1%	6%	1%
2A651A	17%	59%	54%	55%	55%	66%
2A671A		9%	11%	4%	8%	24%
2A631B	0	0	0	4%	1%	*
2A651B	0	2%	2%	1%	3%	*
2A671B	0	0	0	0	1%	*
2A691	0	0	0	0	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	100%	70%	77%	76%	66%	33%
E-5	0	21%	15%	24%	27%	42%
E-6	0	9%	6%	0	6%	19%
E-7	0	0	2%	0	1%	5%
E-8	0	0	0	0	0	*
E-9	0	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	40	82	65	72	119	138
AVERAGE MONTHS TAFMS PERCENT IN FIRST ENLISTMENT	23	77	72	58	74	120
	94%	43%	22%	49%	44%	14%

* INDICATES LESS THAN 1 PERCENT

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ACTIVE DUTY)

	GENERAL ENGINE MAINT CLUSTER (STG586)	SECTION NCOIC JOB (STG281)	JUNIOR TURBO- PROP JOB (STG432)	CAMS CLUSTER (STG588)	MODULAR ENGINE REPAIR JOB (STG600)	IN- SHOP PROP JOB (STG226)
TOTAL NUMBER IN GROUP ACTIVE DUTY IN GROUP	2,247 1,273	126 110	65 49	141 77	33 31	103 43
DAFSC DISTRIBUTION						
2A631C	11%	*	0	10%	32%	0
2A631D	0	*	0	3%	10%	0
2A631E	*	*	0	1%	0	0
2A651A	48%	50%	0	40%	58%	0
2A671A	13%	43%	0	30%	0%	0
2A631B	6%	0	84%	1%	0	44%
2A651B	16%	3%	16%	8%	0	44%
2A671B	5%	3%	0	5	0	12%
2A691	0	0	0	1%	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	36%	11%	98%	34%	68%	65%
E-5	46%	41%	2%	26%	13%	21%
E-6	18%	38%	0	27%	0	7%
E-7	0	10%	0	12%	0	7%
E-8	0	0	0	1%	0	0
E-9	0	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	186	148	91	104	75	113
AVERAGE MONTHS TAFMS	106	155	20	137	60	72
PERCENT IN FIRST ENLISTMENT	22%	5%	88%	18%	45%	47%

* INDICATES LESS THAN 1 PERCENT

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ACTIVE DUTY)

	NONPOWER ESE/APU/ SGT CLUSTER (STG064)	FLTLINE EXPEDIT- OR JOB (STG51)	QA INSPECT- OR JOB (STG140)	SUPER- VISORS CLUSTER (STG289)	INSTRUCT- OR JOB (STG074)	MATERIAL SUPPORT JOB (STG298)
TOTAL NUMBER IN GROUP	144	21	98	457	60	89
ACTIVE DUTY IN GROUP	131	18	59	338	52	80
DAFSC DISTRIBUTION						
2A631C	17%	0	0	1%	0	2%
2A631D	7%	0	0	0	0	0
2A631E	2%	0%	0	0	0	0
2A651A	50%	11%	14%	9%	52%	40%
2A671A	15%	78%	61%	66%	35%	44%
2A631B	0	0	0	0	0	3%
2A651B	8%	0	0	1	10%	4%
2A671B	1%	11%	11%	10	3%	7%
2A691	0	0	8%	13%	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	61%	6%	0	1%	8%	19%
E-5	28%	6%	38%	6%	48%	31%
E-6	8%	39%	27%	17%	38%	31%
E-7	3%	51%	31%	65%	4%	19%
E-8	0	0	2%	9%	2%	0
E-9	0	0	2%	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	56	14	55	78	33	64
AVERAGE MONTHS TAFMS	96	191	182	205	160	161
PERCENT IN FIRST ENLISTMENT	32%	0	0	1%	2%	7%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ACTIVE DUTY)

	ENGINE MANAGEMENT JOB (STG309)	EQUIPMENT MANAGEMENT JOB (STG278)
TOTAL NUMBER IN GROUP	68	94
ACTIVE DUTY IN GROUP	46	90
DAFSC DISTRIBUTION		
2A631C	2%	12%
2A631D	0	6%
2A631E	0	6%
2A651A	55%	65%
2A671A	41%	1%
2A631B	0	3%
2A651B	2%	7%
2A671B	0	0
2A691	0	0
PAYGRADE DISTRIBUTION		
E-1 TO E-4	22%	72%
E-5	34%	27%
E-6	22%	1%
E-7	24%	0
E-8	0	0
E-9	0	0
AVERAGE NUMBER OF TASKS PERFORMED	66	18
AVERAGE MONTHS TAFMS	156	82
PERCENT IN FIRST ENLISTMENT	0	34%

TABLE 5

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (AFRES)

	APPRENT	FLTLINE	CUT	IN-	TEST
	F100	ENGINE	CREW	INSPECT-	CELL
	MAINT	MAINT	CHIEF	ION	SHOP
	JOB	CLUSTER	JOB	JOB	CLUSTER
	(STG422)	(STG346)	(STG387)	(STG598)	(STG528) (STG444)
TOTAL NUMBER IN GROUP	45	166	81	192	1,216
AFRES IN GROUP	3	11	15	59	159
DAFSC DISTRIBUTION					
2A631C	0	0	0	3%	7%
2A631D	0	0	0	0	0
2A631E	0	0	0	0	0
2A651A	67%	64%	80%	78%	68%
2A671A	33%	36%	20%	19%	23%
2A631B	0	0	0	0	0
2A651B	0	0	0	0	1%
2A671B	0	0	0	0	1%
2A691	0	0	0	0	0
PAYGRADE DISTRIBUTION					
E-1 TO E-4	0	9%	7%	3%	10%
E-5	67%	55%	55%	75%	65%
E-6	33%	36%	36%	17%	22%
E-7	0	0	2%	5%	3%
E-8	0	0	0	0	0
E-9	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	37	70	59	75	128
					133

TABLE 5 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (AFRES)

	GENERAL ENGINE MAINT CLUSTER (STG586)	SECTION NCOIC JOB (STG281)	JUNIOR TURBO- PROP JOB (STG432)	CAMS CLUSTER (STG588)	MODULAR ENGINE REPAIR JOB (STG600)	IN- SHOP PROP JOB (STG226)
TOTAL NUMBER IN GROUP	2,247	126	65	141	0	103
AFRES IN GROUP	308	8	8	16	0	7
DAFSC DISTRIBUTION						
2A631C	0	0	0	6%	0	0
2A631D	0	0	0	0	0	0
2A631E	0	0	0	0	0	0
2A651A	43%	13%	0	44%	0	0
2A671A	26%	74%	0	31%	0	13%
2A631B	0	0	0	0	0	29%
2A651B	17%	0	63%	13%	0	29%
2A671B	14%	13%	37%	6	0	29%
2A691	0	0	0	0	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	6%	0	0	25%	0	43%
E-5	47%	13%	88%	25%	0	14%
E-6	37%	75%	12%	38%	0	29%
E-7	10%	12%	0	11%	0	14%
E-8	0	0	0	0	0	0
E-9	0	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	246	123	99	160	0	158

TABLE 5 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (AFRES)

	NONPOWER ESE/APU/ SGT CLUSTER (STG064)	FLTLINE EXPEDIT- OR JOB (STG551)	QA INSPECT- OR VISORS JOB (STG140)	SUPER- CLUSTER (STG289)	INSTRUCT- OR JOB (STG074)	MATERIAL SUPPORT JOB (STG298)
TOTAL NUMBER IN GROUP AFRES IN GROUP	144	21	98	457	60	89
	2	1	8	39	6	3
DAFSC DISTRIBUTION						
2A631C	0	0	0	0	0	0
2A631D	0	0	0	0	0	0
2A631E	0	0	0	0	0	0
2A651A	0	0	0	2%	17%	67%
2A671A	100%	100%	62%	54%	83%	33%
2A631B	0	0	0	0	0	0
2A651B	0	0	0	0	0	0
2A671B	0	0	38%	0	0	0
2A691	0	0	0	44%	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	0	0	0	0	0	0
E-5	0	0	0	0	17%	0
E-6	50%	0	50%	2%	66%	100%
E-7	50%	100%	50%	54%	17%	0
E-8	0	0	0	41%	0	0
E-9	0	0	0	3%	0	0
AVERAGE NUMBER OF TASKS PERFORMED	47	9	67	111	40	88

TABLE 5 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (AFRES)

	ENGINE MANAGEMENT JOB (STG302)	EQUIPMENT MANAGEMENT JOB (STG278)
TOTAL NUMBER IN GROUP AFRES IN GROUP	68 9	94 2
DAFSC DISTRIBUTION		
2A631C	11%	0
2A631D	0	0
2A631E	0	0
2A651A	22%	50%
2A671A	67%	50%
2A631B	0	0
2A651B	0	0
2A671B	0	0
2A691	0	0
PAYGRADE DISTRIBUTION		
E-1 TO E-4	11%	50%
E-5	22%	0
E-6	45%	0
E-7	22%	0
E-8	0	0
E-9	0	0
AVERAGE NUMBER OF TASKS PERFORMED	85	10

TABLE 6

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ANG)

	APPRENT F100	FLTLINE MAINT	CUT CLUSTER (STG422)	CREW CHIEF JOB (STG349)	INSPEC- TION JOB (STG387)	IN- SHOP CLUSTER (STG588)	TEST CELL CLUSTER (STG444)
TOTAL NUMBER IN GROUP	45	166	81	192	1,216	267	
ANG IN GROUP	13	20	1	48	377	31	
DAFSC DISTRIBUTION							
2A631C	0	0	0	0	0	0	0
2A631D	0	0	0	0	0	0	0
2A631E	0	0	0	0	0	0	0
2A651A	92%	85%	100%	81%	80%	65%	
2A671A	8%	15%	0	13%	19%	35%	
2A631B	0	0	0	0	0	0	0
2A651B	0	0	0	0	6%	1%	0
2A671B	0	0	0	0	0	0	0
2A691	0	0	0	0	0	0	
PAYGRADE DISTRIBUTION							
E-1 TO E-4	46%	50%	0	54%	35%	19%	
E-5	46%	40%	0	38%	45%	45%	
E-6	8%	10%	100%	6%	19%	29%	
E-7	0	0	0	2%	1%	7%	
E-8	0	0	0	0	0	0	
E-9	0	0	0	0	0	0	
AVERAGE NUMBER OF TASKS PERFORMED	37	90	49	70	137	155	

TABLE 6 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ANG)

	GENERAL ENGINE MAINT CLUSTER (STG586)	SECTION NCOIC JOB (STG281)	JUNIOR TURBO- PROP JOB (STG432)	CAMS CLUSTER (STG588)	MODULAR ENGINE REPAIR JOB (STG600)	IN- SHOP PROP JOB (STG226)
TOTAL NUMBER IN GROUP						
ANG IN GROUP	2,247	126	65	141	33	103
ANG IN GROUP	666	6	8	48	2	53
DAFSC DISTRIBUTION						
2A631C	0	0	0	0	0	0
2A631D	0	0	0	0	0	0
2A631E	0	0	0	0	0	0
2A651A	35%	17%	0	50%	100%	0
2A671A	34%	66%	0	27%	0	0
2A631B	0	0	0	0	0	0
2A651B	21%	0	100%	0	0	70%
2A671B	10%	17%	0	17%	0	30%
2A691	0	0	0	0	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	12%	0	50%	29%	100%	10%
E-5	40%	17%	50%	35%	0	50%
E-6	33%	0	0	19%	0	29
E-7	14%	83%	0	17%	0	11%
E-8	1%	0	0	0	0	0
E-9	0	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	272	131	87	157	76	182

TABLE 6 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ANG)

	NONPOWER ESE/APU/ SGT CLUSTER (STG064)	FLTLINE EXPEDIT-OR JOB (STG551)	QA INSPECT-OR JOB (STG140)	SUPER- VISORS JOB (STG289)	INSTRUCT-OR JOB (STG074)	MATERIAL SUPPORT JOB (STG298)
TOTAL NUMBER IN GROUP	144	21	98	457	60	89
ANG IN GROUP	11	2	31	80	2	6
DAFSC DISTRIBUTION						
2A631C	0	0	0	0	0	0
2A631D	0	0	0	0	0	0
2A631E	0	0	0	0	0	0
2A651A	55%	50%	0	0	50%	50%
2A671A	18%	50%	77%	31%	0	50%
2A631B	0	0	0	0	0	0
2A651B	18%	0	0	0	50%	0
2A671B	9%	0	33%	14%	0	0
2A691	0	0	0	55%	0	0
PAYGRADE DISTRIBUTION						
E-1 TO E-4	36%	0	0	0	0	0
E-5	27%	50%	0	0	0	50%
E-6	27%	0	10%	6%	100%	33%
E-7	9%	0	90%	43%	0	17%
E-8	0	50%	0	51%	0	0
E-9	0	0	0	0	0	0
AVERAGE NUMBER OF TASKS PERFORMED	63	15	67	172	24	122

TABLE 6 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS (ANG)

	ENGINE MANAGEMENT JOB (STG302)	EQUIPMENT MANAGEMENT JOB (STG278)
TOTAL NUMBER IN GROUP	68	94
ANG IN GROUP	13	2
DAFSC DISTRIBUTION		
2A631C	0	0
2A631D	0	0
2A631E	0	0
2A651A	0	0
2A671A	92%	100%
	8%	0
2A631B	0	0
2A651B	0	0
2A671B	0	0
2A691	0	0
PAYGRADE DISTRIBUTION		
E-1 TO E-4	0	0
E-5	0	0
E-6	54%	50%
E-7	46%	50%
E-8	0	0
E-9	0	0
AVERAGE NUMBER OF TASKS PERFORMED	81	20

When describing Time In Present Job, Time In Career Field, and Total Active Federal Military Service (TAFMS) in the group descriptions below, data for AFRES and ANG personnel are not reflected due to the manner in which these personnel accrue their time (different from Active Duty personnel).

Another way to illustrate these jobs is to summarize tasks performed into groups of tasks (task modules). This allows for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. Each job/cluster description contains a display of related task modules. This display shows the number of tasks included in a module, the average percent time spent on that module, and an average percent of members performing the particular task module. These modules were identified through CODAP coperformance clustering, which calculates the probability that members who perform one task will also perform a second task or group of related tasks. Representative task modules are listed as part of the job description. A complete list of task modules with respective tasks is presented in Appendix B.

I. APPRENTICE F100 ENGINE MAINTENANCE JOB (STG422). The 45 members of this job represent less than 1 percent of the total survey sample. The 29 Active Duty members average just under 2 years TAFMS, making them the youngest members in the sample survey. Members of this group spend 86 percent of their time (more than any other job group) performing tasks pertaining to general aircraft engine maintenance functions, and another 8 percent of their time on in-shop maintenance of engines. On the average, Apprentice F100 Engine Maintenance Job members on Active Duty perform 40 tasks, and AFRES and ANG members perform 37 tasks. These low numbers of task performance can be attributed to members of this job being in apprenticeship and still in the process of learning the job.

APPRENTICE F100 ENGINE MAINTENANCE JOB			
	AD	AFRES	ANG
Number of members	29	3	13
Average number of tasks performed	40	37	37
Average time in present job	1.3 yrs	N/A	N/A
Average time in career field	1.7 yrs	N/A	N/A
Average TAFMS	1.9 yrs	N/A	N/A
Predominant paygrade	E-3	E-5	E-5

Representative tasks for this job include:

- remove or replace engine gearbox assemblies
- remove or replace fan modules, fan sections, or fan components
- remove or replace afterburner or augmenter system components
- remove or replace fan turbine inlet temperature (FTIT) system components
- remove or replace compressor inlet variable vane (CIVV) system components
- remove or replace rear compressor variable vane (RCVV) system components
- remove or replace events history recorders (EHRs)
- remove or replace engine gearbox assemblies

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0002	Engine Sys Comp/Access R&R	15	21	54
0004	In-Shop Repair	17	16	34
0005	Afterburner/Augmenter Maintenance	6	7	36
0006	F100 Engine In-Shop Maintenance	8	8	40

These data show the emphasis of this job is toward the F100 engine and its in-shop repair. Maintenance on afterburners/augmenters and engine systems components/accessories removal and replacement is also evident.

Respondents holding this job (29 Active Duty, 13 ANG, and 3 AFRES) have an average paygrade of E-3, which indicates they are relatively new in the AFSC. Nineteen members (42 percent) of this group indicate having a 2A651A DAFSC, while another 18 (40 percent) hold the 2A631D DAFSC. Personnel indicate performing maintenance on all dash number F100 engines (see Appendix C, Examples of Aircraft Engines Maintained Across Career Ladder Jobs).

II. FLIGHTLINE ENGINE MAINTENANCE CLUSTER (STG346). The 166 members of this cluster represent 3 percent of the total survey sample. Sixty-three percent of their time is spent performing tasks pertaining to general aircraft engine maintenance functions, while another 14 percent of their time (more than any other job) is spent on flightline maintenance on aircraft engines, and 7 percent is spent on CUT tasks.

Representative tasks for this cluster include:

FLIGHTLINE ENGINE MAINTENANCE CLUSTER			
	AD	AFRES	ANG
Number of members	135	11	20
Average number of tasks performed	82	70	90
Average time in present job	3 yrs	N/A	N/A
Average time in career field	6 yrs	N/A	N/A
Average TAFMS	6.5 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-4

- leak check operating engines
- remove or replace engines in aircraft
- prepare aircraft for engine removals or installations
- position maintenance stands for engine removals or installations
- attach engines to aircraft installation or removal equipment

- connect or disconnect test equipment to engines
- launch or recover aircraft
- perform ground observer duties
- position or remove aircraft chocks or pins

Active Duty incumbents have a predominant paygrade of E-4 and average 7 years TAFMS. All but 2 of the 166 members of the Flightline Engine Maintenance Cluster hold AFSC 2A6X1A/C/D or E.

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspections	23	15	51
0007	Flightline Engine Maintenance	8	8	67
0008	Engine Rigging	4	2	39
0009	Remove or Replace Aircraft Engines	5	6	72

As shown by the above data, members in the Flightline Engine Maintenance Cluster spend 31 percent of their job time performing tasks in modules that depict maintaining aircraft engines on the flightline. Conducting inspections, removing or replacing aircraft engines, and rigging the engines to the aircraft are performed by the majority of personnel in this cluster.

This cluster contains two jobs. The first, the Nonafterburning Engine Job, contains 65 members who maintain nonaftersburning engines on the flightline. This is indicated by tasks being performed that relate to maintenance of thrust reverses. Fifty-seven incumbents in this job indicate they are maintaining the TF33 and TF39 engines on the C-141A/B and C-5A/B aircraft. The 51 Active Duty incumbents in this job average just over 3 years TAFMS.

The second job is the Afterburning Engine Job. The 63 members of this job are distinguished from other personnel in this cluster by their performance of tasks relating to afterburning/augmenter engines. One hundred percent indicate they are maintaining engines on the F-15, F-16, or B-1B aircraft. Tasks include inspect, remove or replace, or troubleshoot afterburners or augmenters. Active Duty personnel, 55 in this job, are the senior members of the cluster averaging just over 8 years in TAFMS.

III. CROSS UTILIZED TRAINED (CUT) CREW CHIEF JOB (STG387). Members of the CUT Crew Chief Job indicate spending more time than any other job (25 percent), performing CUT tasks. The 81 personnel (65 Active Duty, 15 AFRES, and 1 ANG) in this group perform traditional crew chief duties such as: launch or recover aircraft; position or remove aircraft chocks or pins; and tow aircraft. In addition, they perform aircraft engine tasks that would normally be performed by crew chiefs, such as service engine oil systems.

CUT CREW CHIEF JOB			
	AD	AFRES	ANG
Number of members	65	15	1
Average number of tasks performed	57	59	49
Average time in present job	2 yrs	N/A	N/A
Average time in career field	5.8 yrs	N/A	N/A
Average TAFMS	6 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-6

Representative tasks for this job include:

- position or remove aircraft chocks or pins
- launch or recover aircraft
- tow aircraft
- perform single-point or multipoint aircraft refueling or defueling
- walk wings or tails during aircraft towing operations
- service engine oil systems
- perform ground observer duties
- leak check operating engines
- service CSD or TDS systems

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0014	Crew Chief Duties	16	20	54
0007	Flightline Engine Maintenance	8	11	57
0001	General Engine Inspections	23	16	36
0011	APU/SGT Flightline Maintenance	13	7	29

These data show the emphasis of this job toward crew chief tasks. Twenty percent of the CUT Crew Chief Job time is being spent in this module. The flightline engine maintenance task module consumes another 11 percent of their job time, while another 16 percent is being spent in general engine inspection.

Active Duty respondents have a predominant paygrade of E-4 and average 6 years TAFMS. Members of this group indicate maintaining aircraft with TF engines. Ninety-eight percent (80 out of 81) of the members of the CUT Crew Chief Job hold DAFSC 2A6X1A or C.

IV. INSPECTION JOB (STG588). Members of this job represent 1 percent of the total survey sample. The majority of tasks performed by incumbents in the Inspection Job pertain to inspecting aircraft engines and engine systems components. Forty-five percent indicate being assigned to an inspection phase dock. Between the three components, Active Duty, AFRES, and ANG, members average performing 73 tasks. Active Duty personnel in this job average over 5 years TAFMS, plus, they have an average paygrade of E-4.

INSPECTION JOB			
	AD	AFRES	ANG
Number of members	85	59	48
Average number of tasks performed	72	75	70
Average time in present job	2.5 yrs	N/A	N/A
Average time in career field	4.8 yrs	N/A	N/A
Average TAFMS	5.6 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-4

Representative tasks for this job include:

- inspect engine plumbing
- inspect engine oil filters
- inspect engine fan section components
- inspect engine exhaust section components
- inspect engine magnetic chip detectors
- inspect fuel filters
- drain fuel filters
- inspect engine stator vanes
- inspect engine compressors

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspections	23	29	71
0003	In-Shop Inspections	9	7	50

These data clearly indicate that the members of the Inspection Job are doing just that, conducting inspections of engines. Seventy-one percent perform general engine inspections, while 50 percent perform in-shop inspections.

Ninety-six percent of the incumbents in the Inspection Job hold AFSC 2A6X1A/C or E. The component makeup for this job is Active Duty-44 percent, AFRES-31 percent, and ANG-25 percent.

V. IN-SHOP CLUSTER (STG528). The 1,216 members of this cluster represent the second largest group in the survey sample (18 percent). Even though they indicate spending the majority of their time on general aircraft engine tasks, these tasks are in-shop related. In addition, they spend 13 percent (more than any other job) on those tasks that are purely in-shop.

Representative tasks performed by members of this cluster are:

IN-SHOP CLUSTER			
	AD	AFRES	ANG
Number of members	680	159	377
Average number of tasks performed	119	128	137
Average time in present job	2.8 yrs	N/A	N/A
Average time in career field	6.2 yrs	N/A	N/A
Average TAMS	6.6 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-5

- remove or replace engine plumbing
- remove or replace fan modules, fan sections, or fan components
- remove or replace engine or exhaust section components
- remove or replace engine fuel manifolds or nozzles
- remove or replace engine bearings
- remove or replace engine fan ducts
- remove or replace engines on maintenance stands and adapters
- inspect engine fuel nozzles

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspections	23	18	79
0002	Engine Systems Component/ Accessories R&R	15	10	78
0003	In-Shop Inspections	9	5	61
0004	In-Shop Repair	17	10	66

Members of the In-Shop Cluster perform tasks in task modules that relate to in-shop engine maintenance. Data indicate that 23 percent of these incumbents' job time is spent on performing inspections, which is a large portion of in-shop maintenance on engines. Removing or replacing components/accessories and repairing these components/accessories, makes up the other major portion of in-shop maintenance.

In-Shop Cluster members on Active Duty have a predominant paygrade of E-4, and over 6 years TAFMS. Component status shows 56 percent of the cluster are on Active Duty, 31 percent are in AFRES, and the remaining 13 percent are members of the ANG.

The In-Shop Cluster also contains two jobs. As in the Flightline Engine Maintenance Cluster, this cluster is divided by the engines being maintained, either turbofan or afterburning/augmenting engines. In the first job, In-Shop TF Maintenance Job, 33 members are performing tasks that pertain to engines with thrust reverses. Examples of tasks performed include: remove or replace thrust reverser assemblies; remove or replace thrust reverser assembly components; and assemble or disassemble thrust reverser assemblies. Fifty-two percent of the incumbents in this job indicate being assigned to Air Mobility Command (AMC), while another 42 percent belong to AFRES.

The second job, In-Shop AB Engine Job, has 38 members that maintain afterburning engines in-shop. Eighty-two percent of these incumbents are assigned to the ANG as the majority of ANG aircraft engines (F100) are still being maintained by the traditional engine shop or Jet Engine Intermediate Maintenance shop. Tasks these personnel perform include: remove or replace afterburners or augmenters; assemble or disassemble afterburners or augmenters; and remove or replace afterburner or augmenter system components.

VI. TEST CELL CLUSTER (STG444)

Members of the Test Cell Cluster indicate spending 59 percent of their time on tasks pertaining to general aircraft engine maintenance and 17 percent of their time (more than any other job group) is being spent on test cell tasks. Eighty-five percent of these incumbents are working in a test cell, while another 8 percent indicate their work area is in a hush house. The 267 personnel in this cluster represent 4 percent of the survey sample.

TEST CELL CLUSTER			
	AD	AFRES	ANG
Number of members	220	16	31
Average number of tasks performed	138	133	155
Average time in present job	2.9 yrs	N/A	N/A
Average time in career field	9.5 yrs	N/A	N/A
Average TAFMS	10 yrs	N/A	N/A
Predominant paygrade	E-5	E-6	E-5

Representative tasks performed by members of this cluster include:

- operationally check engines installed on test cells
- inspect engines before and after installation in test cells
- remove or replace engines in test cells
- analyze engine operation data during test cell runs
- operate test cells
- inspect test cell support equipment
- compute engine parameters on test cell engines
- connect or disconnect test cell throttle-to-engine fuel controls

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspection	23	11	60
0007	Flightline Engine Maintenance	8	5	72
0017	Test Cell	24	19	84
0010	Flightline Troubleshooting	14	6	61

Task module data clearly indicates that 84 percent of the members of the Test Cell Cluster are spending quite a bit of their time (19 percent) maintaining engines being run across the test cell. Engine inspection and troubleshooting also play a major role in this cluster.

Active Duty members of this cluster have an average paygrade of E-5. They also average 10 years TAFMS. The MAJCOMs these members indicate being assigned to are those primarily with afterburning/augmenting engines (ACC, PACAF, and USAFE). Components status indicates 82 percent of the members of the Test Cell Cluster are on Active Duty, 12 percent are AFRES, and the remainder are ANG (6 percent)

The Test Cell Cluster contains two jobs, Test Cell Maintenance Job and Test Cell NCOIC Job. First, the 241 members of the Test Cell Maintenance Job are involved with performing tasks pertaining to maintaining the test cells and running engines across the test cells. Examples of these tasks include: inspect test cells; inspect test cell support equipment; and service test cell fluids.

Second, the Test Cell NCOIC Job contains 23 personnel. These incumbents are responsible for the supervision of the test cell and engines being run across test cells. These tasks include: direct test activities; assign maintenance and repair work; and determine work priorities.

VII. GENERAL ENGINE MAINTENANCE CLUSTER (STG586). The 2,247 members of the General Engine Maintenance Cluster represent the largest group (33 percent) in the survey sample. Although they indicate spending 53 percent of their time performing tasks related to general aircraft engine maintenance, they represent varied cross sections of the Aerospace Propulsion career ladder. Four jobs were identified in this cluster, Flightline Maintenance, ANG/AFRES Flightline Maintenance, Turboprop Maintenance, and Supervisor jobs. These jobs will be discussed in detail below. Members of the three components average performing a high number of tasks (Active Duty-186, AFRES-246, and ANG-272). These high numbers of tasks performed by AFRES and ANG personnel are a result of the type of maintenance performed at their units. Some of these units have yet to go to 2-level maintenance, so their personnel are still working out of the traditional engine shop. In other words, all flightline and in-shop maintenance is located in one shop.

GENERAL ENGINE MAINTENANCE CLUSTER			
	AD	AFRES	ANG
Number of members	1273	308	666
Average number of tasks performed	186	246	272
Average time in present job	4 yrs	N/A	N/A
Average time in career field	8.8 yrs	N/A	N/A
Average TAFMS	9.2 yrs	N/A	N/A
Predominant paygrade	E-5	E-5	E-6

Representative tasks performed by members of this cluster include:

- inspect engines before and after operation
- connect or disconnect test equipment to engines
- adjust engine system components
- rig engine throttle control systems
- troubleshoot engine starter systems

- perform flex borescope inspections of engines
- operationally check installed engines
- inspect engine controls
- troubleshoot engine fuel systems

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspections	23	11	82
0002	Engine Systems Components/ Accessories R&R	15	5	73
0007	Flightline Engine Maintenance	8	4	85
0008	Engine Rigging	5	2	75
0009	Remove or Replace Aircraft Engines	5	2	81
0010	Flightline Troubleshooting	14	5	71

The number of task module members of the General Engine Maintenance Cluster are performing in reflects the varied jobs in the cluster. Modules include all aspects of flightline engine maintenance for both "A" and "B" Shreds.

Active Duty incumbents have a predominant paygrade of E-5 and average over 9 years TAFMS.

Forty-three percent of the total members in this cluster hold DAFSC 2A651A, 21 percent hold DAFSC 2A671A, 18 percent hold DAFSC 2A651B, and 8 percent are holding DAFSC 2A671B. The remainder (10 percent) of personnel hold the "B" and "C" shred 3-skill level.

As noted above, this cluster contains four jobs. These are: Flightline Maintenance Job; ANG/AFRES Flightline Maintenance Job; Turboprop Maintenance Job; and Supervisors Job. Although most of the members of the General Engine Maintenance Cluster indicated they perform tasks pertaining to general aircraft engine maintenance, these jobs warrant discussion on their own. A description of each of the four jobs follows.

A. Flightline Maintenance Job (STG920). The 1,012 members of this job perform a variety of tasks pertaining to general aircraft engine maintenance and flightline maintenance on aircraft engines. All members of this job hold AFSC 2A6X1A. Seventy-seven percent are from Active Duty MAJCOMs, and they perform an average of 172 tasks.

Representative tasks for Flightline Maintenance Job members include:

- leak check operating engines
- inspect engines before and after operation
- remove or replace engines in aircraft
- inspect engine fan section components
- inspect engine exhaust system components
- connect or disconnect test equipment to engines
- remove or replace engine oil system components

B. ANG/AFRES Flightline Maintenance Job (STG958). Seventy-three percent of the incumbents in this job indicate belonging to ANG units with another 16 percent in AFRES units. The remaining 11 percent are scattered among Active Duty MAJCOMs. These ANG/AFRES job members spend 52 percent of their time on tasks related to general aircraft engine maintenance functions and another 9 percent on in-shop maintenance of aircraft engines. They perform an average of 309 tasks, an unusually high number, which is indicative of the organization of ANG/AFRES maintenance units. Personnel in these units tend to work out of one engine shop and perform both flightline and in-shop related tasks.

Representative tasks performed by members of this job are:

- install engines on transportation stands or trailers
- inspect engine combustion sections
- inspect engine stator vanes
- inspect turbine rotor blades
- service engine oil systems
- leak check operating engines
- prepare engine components for shipment
- perform rigid borescope inspections of engines

C. Turboprop Maintenance Job (STG1001). The majority of the 609 members (98 percent) of the Turboprop Maintenance Job hold AFSC 2A6X1B (62 percent AFSC 2A651B, 23 percent AFSC 2A671B, and 13 percent AFSC 2A631B). They spend 46 percent of their time on tasks pertaining to general aircraft engine maintenance functions and another 13 percent on tasks dealing with general propeller maintenance functions. Fifty-four percent of the incumbents in the Turboprop Maintenance Job are assigned to Active Duty MAJCOMs, and the remaining 46 percent belong to ANG (30 percent) and AFRES (16 percent)

Representative tasks performed by members of the Turboprop Maintenance Job include:

- remove or replace engine tailpipes
- remove or replace propeller brush blocks
- rig engine control linkages
- inspect turbine inlet temperature (TIT) systems
- remove or replace TIT system components
- remove or replace temperature datum systems
- troubleshoot temperature datum systems
- remove or replace propellers on aircraft

D. Supervisors Job (STG1002). Members of this job are first-line supervisors who not only spend 49 percent of their time on tasks related to general aircraft engine maintenance, but also are deeply involved with supervisory and training task performance (29 percent). The majority are on Active Duty (80 percent) and have an average paygrade of E-5. Ninety-six percent of these job incumbents hold AFSC 2A6X1A (52 percent DAFSC 2A651A and 44 percent DAFSC 2A671A).

Representative tasks performed by members of this job are:

- supervise Aerospace Propulsion Apprentice, Jet Engines (AFSC 2A631A)
- assign maintenance and repair work
- conduct OJT
- counsel trainees on training progress
- determine work priorities
- annotate training records
- evaluate personnel for compliance with performance standards or TOs
- plan or schedule work assignments
- inspect engine exhaust section components

VIII. **SECTION NCOIC JOB (STG281)**. The 124 members of the Section NCOIC job differ from those members of the Superintendents Cluster in that they indicate performing technical tasks in addition to those of a supervisory nature. Incumbents in this job indicate spending 39 percent of their time performing supervisory, training, and CAMS tasks, plus 36 percent on general aircraft engine maintenance functions. Active Duty members comprise 87 percent (110 members) of this job. Members of this job account for 2 percent of the survey sample.

SECTION NCOIC JOB			
	AD	AFRES	ANG
Number of members	110	8	6
Average number of tasks performed	148	123	131
Average time in present job	3.9 yrs	N/A	N/A
Average time in career field	12.5 yrs	N/A	N/A
Average TAFMS	12.9 yrs	N/A	N/A
Predominant paygrade	E-5	E-6	E-7

Representative tasks performed by members of this job are:

- assign maintenance and repair work
- inspect engine plumbing
- determine work priorities
- plan or schedule work assignments
- perform rigid borescope inspections of engines
- coordinate work on engine components with appropriate agencies
- conduct performance feedback worksheet sessions
- direct in-shop maintenance activities
- inspect in-shop maintenance actions
- inspect engine exhaust section components

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0001	General Engine Inspections	23	12	55
0022	First-Line Supervisors	14	11	74
0023	Training Managers	7	4	63

These data clearly show the emphasis of this job is on supervisory duties and tasks, since 74 percent of incumbents are performing tasks in the first-line supervisors task module. They are also spending time completing inspections and making training decisions.

Ninety-two percent (114 out of 124) of the members in the Section NCOIC job hold AFSC 2A6X1A.

VIX. JUNIOR TURBOPROP JOB (STG432). The 65 members in this job indicate they spend the majority (53 percent) of their time on tasks that pertain to general aircraft engine maintenance functions, while also spending 17 percent on general propeller maintenance functions. They average only 2 years TAFMS and 1 year in the job. The majority (63 percent) hold AFSC 2A631B, thus making this group the second youngest or junior group in the survey sample.

Representative tasks performed by members of this job are:

- remove or replace front spinner cones (noses)
- remove or replace propeller brush
- remove or replace propeller anti-icing afterbodies
- remove or replace engine tailpipes
- remove or replace propellers on aircraft
- service propeller systems
- remove or replace valve housings
- adjust propeller blade angles
- rework propeller blade nicks, burrs, or scratches

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0007	Flightline Engine Maintenance	8	7	62
0008	Engine Rigging	4	3	67
0031	General Propeller Maintenance	57	20	32

As expected, the Junior Turboprop Maintenance Job members are performing tasks in modules that pertain to maintaining turboprop aircraft engines. Although the majority are spending time in the flightline engine maintenance and engine rigging task modules, those tasks are concentrated around turboprop aircraft engines.

Eighty-four percent of Active Duty personnel in the Junior Turboprop Job hold DAFSC 2A631B, and as indicated in Annex C, 95 percent are maintaining the T56 engine and propellers on the C-130 aircraft. Component breakout is as follows: Active Duty-76 percent (49 of the 65 members); AFRES-12 percent (8 members), and ANG-12 percent (8 members).

X. CAMS CLUSTER (STG184). These job incumbents are distinguished by spending 30 percent of their time performing tasks pertaining to CAMS functions (more than any other job). CAMS is the system used by all aircraft maintenance personnel to record jobs accomplished on aircraft and associated equipment. Most MAJCOMs use the standard Air Force CAMS, while AMC personnel use the GO82 CAMS for Airlifters System. Fourteen percent of the Active Duty personnel in this job indicate supporting AMC, but there are AFRES and ANG personnel whose units are under the operational command of AMC, and they also use the CAMS for Airlifters system. Duty R, Performing Core Automated Maintenance System (CAMS)/CAMS for Airlifters Functions, in the AFSC 2A6X1A/B JI, was developed to take both CAMS systems into consideration. Members of this cluster represent 2 percent of the survey sample.

CAMS CLUSTER			
	AD	AFRES	ANG
Number of members	77	16	48
Average number of tasks performed	104	160	157
Average time in present job	2.6 yrs	N/A	N/A
Average time in career field	10.7 yrs	N/A	N/A
Average TAFMS	11.4 yrs	N/A	N/A
Predominant paygrade	E-5	E-5	E-5

Representative tasks performed by members of this cluster are:

- access core automated maintenance system (CAMS) menus and data screens
- change CAMS performing workcenter codes
- change CAMS workcenter event narratives
- analyze CAMS data
- conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance
- conduct CAMS interface with base supply
- document maintenance actions in CAMS
- conduct CAMS training
- correct CAMS errors noted during daily verification process

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0018	CAMS	28	30	77
0019	Nonpowered Equipment Maintenance	25	6	29
0022	First-Line Supervisors	14	5	26

Note that 77 percent of the members of the CAMS Cluster spend 30 percent of their job time on tasks associated with the CAMS module. Also, the Nonpowered Equipment Maintenance and First-Line Supervisors modules are present in this cluster.

Active Duty members of this cluster average over 4 years in their present job, over 10 years time in the career field, and have a predominant paygrade of E-5. Thirty-four percent of the members in the CAMS cluster belong to ANG, 11 percent AFRES, and 55 percent (77 of the 141 personnel) are Active Duty.

This cluster also contains two distinct jobs. The first, the CAMS Supervisor Job, consists of the more experienced members (over 13 years TAFMS for Active Duty personnel) who spend 41 percent of their time performing tasks that pertain to CAMS functions, plus another 23 percent of time on tasks involving supervisory duties.

The second is the CAMS Input Job. The 88 members of this group average over 8 years TAFMS (Active Duty) and are the junior group of the two. They perform technical tasks that pertain to inputting of maintenance data into CAMS and also tasks that deal with general aircraft engine maintenance functions. Seventy-one percent of these incumbents hold AFSC 2A6X1A, while 18 percent are in AFSC 2A6X1B (see Table 4).

XI. MODULAR ENGINE REPAIR JOB (STG600). Of the 33 members of the Modular Repair Job, 31 are Active Duty and 2 are ANG personnel. In addition to spending 52 percent of their time on tasks related to general aircraft maintenance functions, incumbents in this job are spending 26 percent of their time on in-shop maintenance tasks. Eighty-one percent (25) of the Active Duty personnel in this job indicate being assigned to a Modular Repair section, and all are assigned to F-15 units around the world. The two ANG members are assigned to F-16 units. Both the F-15 and F-16 are equipped with modular engines.

MODULAR ENGINE REPAIR JOB			
	AD	AFRES	ANG
Number of members	31	0	2
Average number of tasks performed	75	0	76
Average time in present job	3 yrs	N/A	N/A
Average time in career field	4.7 yrs	N/A	N/A
Average TAFMS	5 yrs	N/A	N/A
Predominant paygrade	E-4	N/A	E-4

Representative tasks performed by members of the Modular Engine Repair Job are:

- assemble or disassemble afterburners or augmenters
- inspect afterburners or augmenters
- blend engine fan blades
- remove or replace engine bearings
- inspect turbine rotor blades
- prepare engine modules for shipment
- remove or replace engine carbon seals
- inspect turbine exhaust cases
- repair afterburner or augmenter components

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0003	In-Shop Inspections	9	7	55
0004	In-Shop Repair	17	11	48
0005	Afterburner/Augmenter Maintenance	6	8	69

Members of the Modular Engine Repair Job are performing tasks in modules that depict maintenance on aircraft afterburning/augmenter engines in the shop.

Active Duty members of this group have a predominant paygrade of E-4 and average 3 years on the job. They also average almost 6 years TAFMS.

XII. IN-SHOP PROPELLER JOB (STG226)

The 103 members of this job all indicate having an AFSC of 2A6X1B. They indicate spending 58 percent of their time (more than any other job group) performing tasks pertaining to general propeller maintenance functions and in-shop maintenance on propellers (30 percent and 28 percent respectively). The majority of the personnel in this group are assigned to the ANG (51 percent). In addition to maintaining the engines on the C-130 aircraft, incumbents in the In-Shop Propeller Job also indicate performing maintenance on helicopters such as the MH-53J and HH-60G. Forty-nine percent (21) of the 43 Active Duty personnel in this group are assigned to Air Combat Command, and another 19 percent (8) indicate being assigned to Air Force Special Operations Command.

IN-SHOP PROPELLER JOB			
	AD	AFRES	ANG
Number of members	43	7	53
Average number of tasks performed	113	158	182
Average time in present job	1.8 yrs	N/A	N/A
Average time in career field	5.5 yrs	N/A	N/A
Average TAFMS	6 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-5

Representative tasks performed by members of this job are:

- drain hydraulic oil from propeller components
- remove or replace rear spinners
- remove or replace propellers on assembly stands
- repair cuffs, afterbodies, or spinners
- leak check propeller assemblies
- remove or replace pitch lock regulators
- remove or replace propeller control assemblies
- assemble or disassemble pump housings
- inspect propellers or related components

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0031	General Propeller Maintenance	57	31	67
0032	In-Shop Propeller Maintenance	53	29	72

Members of the In-Shop Propeller Job are spending the majority of their time in the general propeller and in-shop propeller maintenance task modules. Both of these modules contain large numbers of tasks and this depicts the amount of maintenance that can be performed on propellers.

Active Duty members of this group have a predominant paygrade of E-4 and average just under 2 years on the job. They also average 6 years TAFMS.

XIII. NONPOWERED ENGINE SUPPORT EQUIPMENT (ESE)/AUXILIARY POWER UNIT (APU)/SMALL GAS TURBINE (SGT) REPAIR CLUSTER (STG064). Members of the Nonpowered ESE/APU/SGT Repair Cluster indicate spending 28 percent of their time (the most of any job group) performing tasks related to maintaining nonpowered engine support equipment and another 12 percent maintaining auxiliary power units (APUs) or small gas turbine (SGT) engines. Many of the tasks revolve around maintenance of engine installation/removal trailers. Ninety-one percent (131) of the incumbents in this cluster indicate they are on Active Duty. Task performance for members of this cluster is low (an average of 56 tasks) compared to the other clusters and jobs identified in the survey sample. This is a result of only being able to perform limited maintenance on most aircraft or ground support equipment, APUs/SGTs, and the small number of components or systems on engine trailers.

NONPOWERED ESE/APU/SGT REPAIR CLUSTER			
	AD	AFRES	ANG
Number of members	131	2	11
Average number of tasks performed	56	47	63
Average time in present job	2.3 yrs	N/A	N/A
Average time in career field	7.5 yrs	N/A	N/A
Average TAFMS	8 yrs	N/A	N/A
Predominant paygrade	E-4	E-7	E-5

Representative tasks performed by members of this cluster are:

- clean and pack engine trailer wheel bearings
- inspect and service engine trailer tires
- perform periodic inspections of general support equipment
- assemble or disassemble engine trailer wheel and hub assemblies
- inspect APUs or SGTs
- remove or replace APUs or SGTs on portable test stands
- adjust engine trailer brakes
- assemble or disassemble APUs or SGTs
- inspect and service engine trailer hydraulic systems

Representative task modules of this cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0019	Nonpowered Equipment Maintenance	25	28	52
0020	APU/SGT Repair	10	6	28

The task module percent performing data indicates the makeup of the Nonpowered ESE/APU/SGT Repair Cluster. The majority of the members are involved in the maintenance of nonpowered engine support equipment, while a lesser number are maintaining APUs or SGTs.

Ninety-one percent (119) of the Active Duty members of this group have an AFSC of 2A6X1A, and the remainder (9 percent) hold AFSC 2A6X1B.

Two jobs were identified in this cluster. The first, the APU/SGT Maintenance Job consists of 44 members who spend 38 percent of their time maintaining APUs or SGTs. Tasks include inspecting APUs or SGTs, remove or replace APU or SGT components, and analyze APU or SGT engine operation during test stand runs.

The second job is the Nonpowered ESE Maintenance Job. Ninety-two percent (82) of the members of this job indicate they are on Active Duty. They spend 36 percent of their time on tasks that relate to maintaining nonpowered engine support equipment. Clean and pack engine trailer wheel bearings, inspect and service engine trailer tires, and adjust engine trailer brakes are examples of tasks performed by members of the Nonpowered ESE Job.

XIV. FLIGHTLINE EXPEDITORS JOB (STG551)

The average TAFMS (almost 16 years) identifies the 21 members of the Flightline Expeditors Job as some of the more experienced personnel in the sample survey. This experience is necessary as these incumbents indicate spending 86 percent of their time directing flightline activities. Eighteen of these personnel are on Active Duty and 81 percent indicate being assigned to the flightline. The predominant paygrade for Active Duty personnel is E-6, while E-7 is the paygrade for AFRES and ANG members. These job incumbents indicate performing an unusually small number of tasks (an average of 14) that is indicative of one who would be directing maintenance on the flightline.

FLIGHTLINE EXPEDITORS JOB			
	AD	AFRES	ANG
Number of members	18	1	2
Average number of tasks performed	14	9	15
Average time in present job	1.2 yrs	N/A	N/A
Average time in career field	15.4 yrs	N/A	N/A
Average TAFMS	15.9 yrs	N/A	N/A
Predominant paygrade	E-6	E-7	E-7

Representative tasks performed by members of this job include:

- assign maintenance and repair work
- direct flightline maintenance activities
- determine work priorities
- plan or schedule work priorities
- plan or schedule work assignments

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0022	First-Line Supervisors	14	55	43

Members of the Flightline Expeditors Job are performing tasks contained in the first-line supervisors module, while directing maintenance on the flightline.

XV. QUALITY ASSURANCE INSPECTOR JOB (STG140). The 98 members of the Quality Assurance (QA) Inspector Job indicate spending 47 percent of their time on quality assurance and inspecting and evaluating tasks (26 percent and 21 percent respectively). Like their coworkers in the Flightline Expeditors job above, members of this job also have the experience necessary to be performing as QA Inspectors. Active Duty members average just over 15 years TAFMS.

Representative tasks performed by members of this job include:

- evaluate safety procedures
- coordinate quality assurance problems with maintenance personnel
- inspect flightline maintenance activities

QUALITY ASSURANCE JOB			
	AD	AFRES	ANG
Number of members	59	8	31
Average number of tasks performed	55	67	67
Average time in present job	1.3 yrs	N/A	N/A
Average time in career field	14.7 yrs	N/A	N/A
Average TAFMS	15.2 yrs	N/A	N/A
Predominant paygrade	E-6	E-7	E-7

- evaluation-process maintenance
- perform activity inspections, such as self-inspections or quality assessment programs
- review TO changes
- investigate accidents or incidents
- inspect in-shop maintenance actions

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0022	First-Line Supervisors	14	6	23
0024	Superintendents	23	8	21
0025	Quality Assurance Inspections	17	26	65

Members of the QA Inspector Job spend the highest percentage of their time in the Quality Assurance Inspections module. Performance in the first-line supervisors and superintendents task modules are also present.

Component status for members of this job are: Active Duty-62 percent; AFRES-8 percent; and ANG-32 percent. Sixty-six percent of these incumbents hold DAFSC 2A671A, 19 percent are DAFSC 2A671B, and 5 percent are 9-skill level personnel.

XVI. SUPERVISOR CLUSTER (STG289). The members of the Supervisor Cluster are definitely the senior group of the survey sample, and represent 7 percent of the survey sample. They average just over 17 years TAFMS. Sixty-nine percent of their time is spent performing supervisory and training functions. Incumbents in this cluster indicate job titles that include: Flight Chief; NCOIC, Engine Shop; and NCOIC, Propulsion Branch.

Representative tasks performed by members of this job include:

SUPERVISOR CLUSTER		
	AD	AFRES
	ANG	
Number of members	338	39
Average number of tasks performed	78	111
Average time in present job	2.3 yrs	N/A
Average time in career field	16.7 yrs	N/A
Average TAFMS	17.1 yrs	N/A
Predominant paygrade	E-7	E-7

- interpret policies, directives, or procedures for subordinates
- write recommendations for awards and decorations
- determine logistics requirements, such as space, personnel, or equipment
- indorse enlisted performance reports
- counsel personnel on personal or military-related matters
- analyze workload requirements
- evaluate work schedules
- assign personnel to duty positions

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0022	First-Line Supervisors	14	19	80
0024	Superintendents	23	19	63

Members of the Supervisor Cluster are spending the highest percentage of their time in the first-line supervisors and superintendents task modules, as expected.

Active Duty members account for 74 percent of the component status for this cluster. AFRES members make up 8 percent and ANG personnel make up the remaining 18 percent. Fifty-nine percent of the Supervisors Cluster incumbents hold AFSC 2A671A, 23 percent are 9-levels, and 10 percent are 2A671B shred personnel.

This cluster also contains two identifiable jobs. The first, the Superintendent Job, contains 317 members who indicate spending 57 percent of their time performing tasks related to supervisory duties. These incumbents are the senior members, along with those in the Production Supervisor Job, of the survey sample. Members of the Superintendent Job are shop or upper level supervisors (50 percent indicate being Engine Shop or Propulsion Branch NCOICs).

The Production Supervisor Job is the second job in the Supervisor Cluster. The 46 members of this job are distinguished from the Superintendent Job by the fact that 98 percent indicate they are directing flightline maintenance activities. Fifty-seven percent of the personnel in the Production Supervisor Job are assigned to AMC, which at the time of field administration of the 2A6X1A/B JI was in a Squadron maintenance configuration (AFSC 2A6X1A/B personnel

assigned to aircraft generation squadrons or aircraft maintenance units). The majority of incumbents (61 percent) in this job indicate holding DAFSC 2A671A, while another 15 percent hold DAFSC 2A671B.

XVII. INSTRUCTOR JOB (STG074). The 60 members of the Instructor Job spend over 50 percent of their time performing tasks related to training. Forty-three percent hold the "T" prefix assigned to instructors. At the time of field administration of the AFSC 2A6X1A/B JI, more Field Training Detachments (FTDs) were still in the process of being reactivated, and because of this, some of the training was still being conducted by maintenance training instructors in the Wings. This is evident by the fact that only four of the members of this job indicated a job title of FTD Instructor. Active Duty personnel account for 87 percent (52) members of this job. Incumbents from all three components indicate performing an average of 33 tasks, which is typical for instructor personnel.

INSTRUCTOR JOB			
	AD	AFRES	ANG
Number of members	52	6	2
Average number of tasks performed	33	40	24
Average time in present job	2 yrs	N/A	N/A
Average time in career field	12.8 yrs	N/A	N/A
Average TAFMS	13.3 yrs	N/A	N/A
Predominant paygrade	E-5	E-6	E-6

Representative tasks performed by members of this job include:

- annotate training records
- counsel trainees on training progress
- administer or score tests
- evaluate progress of trainees
- maintain training records, charts, or graphs
- determine training requirements
- maintain training aids or equipment
- conduct resident course classroom training

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0022	First-Line Supervisors	14	10	23
0023	Training Managers	7	21	60
0028	Resident Course/FTD Instruction	11	16	32

In addition to the training managers and resident course/FTD instruction task modules, members of the Instructor Job are also spending time performing supervisory tasks in the first-line supervisors module.

Active Duty members of the Instructor Job average 2 years in their present job, and just over 13 years TAFMS. They also have an average paygrade of E-5. Eighty-six percent of these Active Duty personnel hold the "A" shred, while the remainder have the "B" shred (14 percent). Seventy-three percent of these job members are on Active Duty, 10 percent are AFRES, and 8 percent are ANG.

XVIII. MATERIAL SUPPORT JOB (STG298)

Members of the Material Support Job spend 37 percent of their time on general administrative and supply functions, while spending the same amount of their job time performing supervisory duties. Thirty-five percent (31 members) indicate a job title of NCOIC, Material Support Section. In addition to performing tasks related to equipment or supplies, they are also performing tasks necessary to supervise the material support section.

Representative tasks performed by members of this job include:

- inventory equipment or supplies
- inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits
- determine work priorities
- write enlisted performance reports
- plan or schedule work assignments
- maintain property custodian authorization/custody receipt listings (CA/CRLs)
- perform inspections of special tools
- counsel personnel on personal or military-related matters
- maintain equipment control listings

MATERIAL SUPPORT JOB			
	AD	AFRES	ANG
Number of members	80	3	6
Average number of tasks performed	64	88	121
Average time in present job	2 yrs	N/A	N/A
Average time in career field	13 yrs	N/A	N/A
Average TAFMS	13.4 yrs	N/A	N/A
Predominant paygrade	E-5	E-6	E-6

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0022	First-Line Supervisors	14	13	54
0026	Tool Room	7	13	83
0027	Supply/Equipment	20	22	60

Members of the Material Support Job are performing tasks in modules that pertain to supervising the Material Support section.

Active Duty members of the Material Support Job number 80, AFRES 3, and ANG 6. Active Duty personnel average 2 years in the job, 13 years in the career field and just over 13 years TAFMS. Eighty-nine percent of the incumbents in this job hold AFSC 2A6X1A, and the remaining 11 percent are "B" shred personnel.

XIX. ENGINE MANAGEMENT JOB (STG309)

The 68 members of the Engine Management Job perform an average of 71 tasks that are not technical in nature. Incumbents in this job indicate spending 55 percent of their job time on tasks pertaining to engine management functions and another 15 percent on CAMS functions. Eighty-eight percent of the members of the Engine Management Job prepare consolidated engine management system (CEMS) reports. CEMS is the system that reflects the status of all aircraft engines in the Air Force inventory. The majority (68 percent) are on Active Duty.

ENGINE MANAGEMENT JOB			
	AD	AFRES	ANG
Number of members	46	9	13
Average number of tasks performed	66	85	81
Average time in present job	1.9 yrs	N/A	N/A
Average time in career field	12.3 yrs	N/A	N/A
Average TAFMS	13 yrs	N/A	N/A
Predominant paygrade	E-5	E-6	E-6

Representative tasks performed by members of this job include:

- update automated history reports
- prepare consolidated engine management system (CEMS) reports
- report engine status
- update automated engine inventory, operating time or reconciliation reports
- update automated engine removal or installation data
- prepare engine records for transfer

- monitor time change and inspection requirements
- forecast time change replacement items
- access core automated maintenance system (CAMS) menus and data screens

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0018	CAMS	28	15	37
0034	Engine Management	59	51	53

In addition to spending the majority of their job time in the engine management module, members of the Engine Management Job are also involved with the CAMS task module.

Active Duty members of the Engine Management Job have an average paygrade of E-5. Ninety-five percent hold the "A" shred. They average just over 12 years in the career field. Component status shows Active Duty personnel at 69 percent, 13 percent are AFRES, and 19 percent are ANG.

XX. EQUIPMENT MANAGEMENT JOB (STG278). Ninety-six percent of the members of the Equipment Management Job are Active Duty. They spend 69 percent of their time performing tasks related to general administrative and supply tasks. These incumbents are responsible for issuing the numerous special tools that are required for maintenance of aircraft engines. Incumbents are also responsible for supply functions within the shops, i.e., bench stocks, maintaining D04, D18, D19, and M30 rosters, and equipment control listings. Unlike the Material Support Job members listed above, these group members perform little if any supervisory tasks, concentrating on the technical tasks involved in the material support section. Equipment Management Job personnel perform the second smallest average number of tasks (17) of any group identified in the survey sample.

EQUIPMENT MANAGEMENT JOB			
	AD	AFRES	ANG
Number of members	90	2	2
Average number of tasks performed	18	10	20
Average time in present job	1.4 yrs	N/A	N/A
Average time in career field	6 yrs	N/A	N/A
Average TAFMS	6.8 yrs	N/A	N/A
Predominant paygrade	E-4	E-5	E-6

Representative tasks performed by members of this job include:

- issue special tools
- inventory equipment or supplies
- perform shift security checks of tool cribs
- process damaged tools for distribution or replacement
- maintain bench stock listings
- maintain special tools calibration records
- review and update PMEL listings
- cycle torque wrenches
- dress or resurface tools

Representative task modules of this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Percent Members Performing
0026	Tool Room	7	38	69
0027	Supply/Equipment	20	32	29

Members of the Equipment Management Job are performing in the two task modules that take up the majority of their job time, the tool room and supply/equipment modules.

Active Duty members of the Equipment Management Job have an average paygrade of E-4, and an average of 6 years in the career field. They average just under 7 years TAFMS and 90 percent hold DAFSC 2A631C/D/E or DAFSC 2A651A.

Comparison of Current Group Descriptions to Previous Study

The results of the specialty job analysis were compared to the previous OSR, dated July 1989. The previous survey identified 19 jobs and the current 2A6X1A/B survey identified 7 clusters and 13 jobs. The majority of jobs identified in the previous survey surfaced in this survey (see Table 7). Some group titles may have changed, but the core of the jobs are the same. For example: Phase Dock personnel in the previous survey are now titled Inspection personnel in the current survey because the job encompasses more than just phase inspections; Balance Shop and Accessory Repair personnel in the previous survey are now included in the In-Shop cluster of the current survey; CUT personnel in the previous survey are now titled the CUT Crew Chief Job; Small Gas Turbine personnel in the previous sample grouped under the Nonpowered ESE/APU/SGT cluster in the current survey. Technical Order personnel and engine monitoring

TABLE 7

AFSC 2A6X1A/B

COMPARISON OF MAJOR JOBS BETWEEN SURVEYS

<u>CURRENT SURVEY (N=6,729)</u>	<u>PREVIOUS SURVEY (N=5,427)</u>
APPRENTICE F100 ENGINE MAINTENANCE JOB	FLIGHTLINE PERSONNEL
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	CROSS UTILIZATION TRAINING (CUT) PERSONNEL
CUT CREW CHIEF JOB	PHASE DOCK PERSONNEL
INSPECTION JOB	IN-SHOP PERSONNEL
IN-SHOP CLUSTER	BALANCE SHOP PERSONNEL
	ACCESSORY REPAIR PERSONNEL
	TEST CELL PERSONNEL
	GENERAL ENGINE MAINTENANCE CLUSTER
	SECTION NCOIC JOB
	JUNIOR TURBOPROP JOB
	CAMS CLUSTER
	MODULAR ENGINE REPAIR JOB
	IN-SHOP PROPELLER JOB
	AFTERTURNER/AUGMENTOR MODULE PERSONNEL
	PROPELLER SHOP PERSONNEL
	NONPOWERED SUPPORT EQUIPMENT PERSONNEL

TABLE 7 (CONTINUED)

AFSC 2A6X1A/B

COMPARISON OF MAJOR JOBS BETWEEN SURVEYS

CURRENT SURVEY (N=6,729)

PREVIOUS SURVEY (N=5,427)

SMALL GAS TURBINE PERSONNEL

FLIGHTLINE EXPEDITOR JOB

QUALITY ASSURANCE INSPECTOR JOB

SUPERVISORS CLUSTER

INSTRUCTOR JOB

MATERIAL SUPPORT JOB

ENGINE MANAGEMENT JOB

EQUIPMENT MANAGEMENT PERSONNEL

QUALITY ASSURANCE PERSONNEL

SUPERVISORY PERSONNEL

TRAINING PERSONNEL

MATERIAL SUPPORT PERSONNEL

ENGINE MANAGEMENT PERSONNEL

TECHNICAL ORDER PERSONNEL

HIGHER HEADQUARTERS PERSONNEL

ENGINE MONITORING PERSONNEL

personnel did not group in the current survey, while the CAMS and Equipment Management jobs did not appear in the previous survey. Also not present in the previous survey, but identified in the current survey are the Apprentice F100 Engine Maintenance Section NCOIC, Junior Turboprop Maintenance, and Flightline Expediter jobs. Technical Order personnel, Higher Headquarters personnel, and Engine Monitoring personnel did not group in the current survey.

Summary

In summary, structure analysis identified 7 clusters and 13 jobs: Apprentice F100 Engine Maintenance Job, Flightline Engine Maintenance Cluster, CUT Crew Chief Job, Inspection Job, In-Shop Cluster, Test Cell Cluster, General Engine Maintenance Cluster, Section NCOIC Job, Junior Turboprop Job, CAMS Cluster, Modular Engine Repair Job, In-Shop Propeller Job, Nonpowered ESE/APU/SGT Repair Cluster, Flightline Expediter Job, QA Inspector Job, Supervisors Cluster, Instructor Job, Material Support Job, Engine Management Job, and Equipment Management Job. Analysis reveals the Aerospace Propulsion career ladder to be very diverse, with the core jobs being centered around the different functions of aircraft engine maintenance and the engines and ESE being maintained. The "A" and "B" shreds are clearly separated by AFSC in their own distinct jobs.

SKILL AND EXPERIENCE ANALYSIS

Analysis of DAFSC Groups

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis examines differences in tasks performed between skill levels. This information may then be used to evaluate how well career ladder documents, such as AFMAN 36-2108 *Specialty Descriptions*, reflect what career ladder personnel are actually doing in the field. DAFSCs 2A671A and 2A671B merge at the 9-skill level. The DAFSC 2A691 group will be discussed in the DAFSC 2A6X1A analysis.

ACTIVE DUTY

AFSC 2A6X1A

The distribution of AFSC 2A6X1A skill-level groups across career ladder clusters and jobs is displayed in Table 8. As can be seen, high numbers of DAFSC 2A631C, 2A651A, and 2A671A members are in the core cluster of the career ladder, the General Engine Maintenance Cluster. The other two 3-skill levels, DAFSC 2A631D and 2A631E, have almost one half of their personnel performing in the In-Shop Cluster. As personnel progress through the career ladder, they do begin to move into traditional management and supervisory roles, as indicated by the 224 7-skill level and 43 2A691 (see Table 8) personnel found in the Superintendent Cluster. Career ladder progression is typical in this AFSC.

Table 9 offers a better perspective by displaying the relative percent time spent on each duty across skill-level groups. As expected, 3- and 5-skill level personnel have little to do with supervisory functions (duties A, B, and C), but 7-skill level members spend a larger amount of time in these same duties. As can be seen in Table 9, members of 3- and 5-skill levels spend about the same amount of time in duties F through R, with the exception of Duty K, Performing In-Shop Maintenance on Aircraft Engines. In this duty, 3-skill level DAFSC personnel are spending more time than that of their 5-skill level coworkers. These duties represent the essence of jobs being performed by members of the Aerospace Propulsion Jet Engine AFSC. The bulk of 7-skill level members' time is being spent performing supervisory functions, as mentioned above, and in duties E and F (5 percent in each duty). Specific skill-level group discussions are presented below.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A631C. "C" shred 3-skill level members perform an average of 82 tasks and average 2 years in the specialty. Most (55 percent) hold the grade of Airman First Class. Table 8 shows that 134 of the 575 members in this group perform in the General Engine Maintenance Cluster. Eighty-one percent of their job time is spent performing tasks that pertain to performing general aircraft engine maintenance functions, flightline maintenance on aircraft engines, in-shop maintenance on aircraft engines, maintaining APUs or SGTs, and CUT tasks. The remainder of their time is spread over the remaining duties (see Table 9). Table 10 lists representative tasks these members perform. Examples of these tasks include inspecting engine plumbing, fuel filters, and oil filters, and removing or replacing engine oil system components. Three-skill level "C" shred personnel perform maintenance mainly on nonafterburning or nonaugmenting engines. Twenty-one percent indicate maintaining the TF33-P-7/A engine, 15 percent maintain the TF39-GE-1C engine, 11 percent maintain the F108-CF-100 engine, and 9 percent maintain the TF-33-P-3/103 engine.

TABLE 8

DISTRIBUTION OF AFSC 2A6X1A SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (ACTIVE DUTY)

JOB	2A631C (N=575)		2A631D (N=127)		2A631E (N=91)		2A651A (N=1,857)		2A671A (N=852)		2A691 (N=61)	
	1	2	3	4	5	6	7	8	9	10	11	12
APPRENTICE F100 ENGINE MAINTENANCE JOB	4	18	2	50	0	0	0	0	0	0	0	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	34	3	4	80	12	0	0	0	0	0	0	0
CUT CREW CHIEF JOB	22	0	0	35	7	0	0	0	0	0	0	0
INSPECTION JOB	30	0	1	47	3	0	0	0	0	0	0	0
IN-SHOP CLUSTER	117	60	41	375	56	0	0	0	0	0	0	0
TEST CELL CLUSTER	11	6	3	144	52	1	1	1	1	1	1	1
GENERAL ENGINE MAINTENANCE CLUSTER	134	4	9	605	172	0	0	0	0	0	0	0
SECTION NCOIC JOB	1	1	1	30	47	0	0	0	0	0	0	0
JUNIOR TURBOPROP JOB	0	0	0	55	0	0	0	0	0	0	0	0
CAMS CLUSTER	8	2	1	31	23	1	1	1	1	1	1	1
MODULAR ENGINE REPAIR JOB	10	3	0	18	0	0	0	0	0	0	0	0
IN-SHOP PROPELLER JOB	0	0	0	0	0	0	0	0	0	0	0	0
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	22	9	3	66	19	0	0	0	0	0	0	0
FLIGHTLINE EXPEDITOR JOB	0	0	0	2	14	0	0	0	0	0	0	0
QUALITY ASSURANCE INSPECTOR JOB	0	0	0	8	36	5	0	0	0	0	0	0
SUPERVISORS CLUSTER	3	0	0	32	224	43	0	0	0	0	0	0
INSTRUCTOR JOB	0	0	0	27	18	0	0	0	0	0	0	0
MATERIAL SUPPORT JOB	2	0	0	32	35	0	0	0	0	0	0	0
ENGINE MANAGEMENT JOB	1	0	0	25	19	0	0	0	0	0	0	0
EQUIPMENT MANAGEMENT JOB	11	5	5	59	1	0	0	0	0	0	0	0
NOT GROUPED	165	16	21	137	114	11	0	0	0	0	0	0

TABLE 9

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1A SKILL-LEVEL GROUPS
 (ACTIVE DUTY)
 (RELATIVE PERCENT OF JOB TIME)

DUTIES	DAFSC 2A631C (N=575)	DAFSC 2A631D (N=127)	DAFSC 2A631E (N=91)	DAFSC 2A651A (N=857)	DAFSC 2A671A (N=852)
A ORGANIZING AND PLANNING	2	1	2	5	15
B DIRECTING AND IMPLEMENTING	1	1	1	4	12
C INSPECTING AND EVALUATING	1	*	*	3	12
D TRAINING	*	*	*	4	8
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	4	6	6	6	5
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2	2	3	3	5
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	63	67	63	50	24
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	0	*	*	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	4	1	3	5	3
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	*	0	*	*	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	6	11	11	4	2
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*	0	*	*	*
M PERFORMING TEST CELL FUNCTIONS	1	2	1	2	1
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	4	1	*	3	1
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1	*	*	1	3
P MAINTAINING NINPOWRED ENGINE SUPPORT EQUIPMENT	3	3	4	1	1
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	4	*	1	3	2
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	3	4	5	5	5

* INDICATES LESS THAN ONE PERCENT

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631C ACTIVE DUTY PERSONNEL

PERCENT
MEMBERS
PERFORMING
(N=575)

TASKS

G360	Select and use hand tools	66
G263	Place protective covers on engines	65
G210	Inspect engine plumbing	63
G359	Seal, plug or cap lines or openings	63
G214	Inspect fuel filters	62
G207	Inspect engine oil filters	62
G298	Remove or replace engine oil system components	59
G191	Drain fuel filters	58
G281	Remove or replace engine anti-icing system components	56
G206	Inspect engine magnetic chip detectors	54
G236	Install engines on transportation stands or trailers	53
G203	Inspect engine exhaust section components	51
G204	Inspect engine fan section components	51
G212	Inspect engine trailers or stands	51
F159	Inspect areas for foreign object damage (FOD) items	49
G292	Remove or replace engine fuel system components, other than fuel manifolds or nozzles	49
G365	Service engine oil systems	48
G238	Leak check operating engines	47
G213	Inspect engines before and after operation	47
G211	Inspect engine stator vanes	46
G373	Transfer engines to transportation trailers	45
G276	Remove or replace constant speed drives (CSDs), integrated drive generators (IDGs), or generators	44
G187	Connect or disconnect external aircraft power	43
G272	Remove or replace accessory gearbox assembly components	43
G172	Adjust engine system components	43

DAFSC 2A631D. F100 Engine “D” shred 3-skill level personnel, unlike their “C” shred counterparts, indicate almost half (60) of the members are performing in the In-Shop Cluster. The next largest group (18) is performing in the Apprentice F100 Engine Maintenance Job (see Table 8). Members of this 3-skill level group perform an average of 74 tasks and average just over 2 years in the career field. Sixty-seven percent of their job time is being spent performing tasks pertaining to general aircraft engine maintenance, with another 11 percent on tasks in the in-shop area (see Table 9). Examples of tasks performed by these “D” shred 3-skill level personnel can be found in Table 11 and include: remove or replace afterburner or augmenter system components; remove or replace fan modules, fan sections, or fan components; remove or replace fan turbine inlet temperature (FTIT) system components; and rig afterburner or augmenter systems. The majority of tasks performed by members of this group revolve around maintenance of the different dash number F100 engines flying in F-15 and F-16 aircraft.

DAFSC 2A631E. The 91 “E” shred 3-skill level members, like their “D” shred counterparts, have almost half (40) of their personnel performing in the In-Shop Cluster (see Table 8). They average performing 73 tasks and have just under 2 years in the career field. They spend 63 percent of their job time on tasks in the general aircraft engine maintenance duty, with another 11 percent of time being spent on engine maintenance in-shop (see Table 9). Table 12 shows “E” shreds 3-skill level personnel are performing tasks that include: preparing engines for shipment, inspecting engine exhaust section components, blending engine fan blades, and removing or replacing engine bearings. The majority of tasks performed by these personnel pertain to in-shop maintenance on the F110 engine, with some members maintaining the TF-30-P-109/111, and TF-34-GE-100A.

Tables 13, 14, and 15 depict comparisons of the three AFSC 2A631 shreds and the tasks that differentiate between them. As expected, tasks performed by the “C” shred 3-skill level personnel pertain more to conventional nonafterburning or nonaugmenting engines. Tasks performance for the “D” and “E” 3-skill level groups revolve around maintenance of afterburning/augmenting types of engines, particularly the engines found in the F-15, F-16, and B-1 aircraft. Afterburning/augmenting engine differences can be seen in Table 15, Tasks Which Best Differentiate Between the “D” and “E” Shreds. For example, FTIT systems, rear compressor variable vane (RCVV) systems and compressor inlet variable vane (CIVV) systems are peculiar to the F100 engine of which “D” shred 3-skill level personnel maintain.

DAFSC 2A651A. Five-skill level members comprise the largest group in this career ladder. The 1,857 members of this group perform an average of 116 tasks and average over 8 years in the career ladder. Over half (61 percent) of these members are Senior Airmen or Sergeants. As with 3-skill level members, the biggest group of 5-skill level airmen (605) are members of the General Engine Maintenance Cluster (see Table 8). DAFSC 2A651A members, while indicating they spend 50 percent of their time on task performance in general aircraft engine maintenance functions (see Table 9), also spend time (16 percent) performing supervisory and training tasks.

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631D ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=127)
G263 Place protective covers on engines	73
G360 Select and use hand tools	72
G206 Inspect engine magnetic chip detectors	71
G359 Seal, plug or cap lines or openings	70
G373 Transfer engines to transportation trailers	67
G236 Install engines on transportation stands or trailers	66
G273 Remove or replace afterburner or augmentor system components	66
G300 Remove or replace engine plumbing	66
G296 Remove or replace magnetic chip detectors	66
G310 Remove or replace fan modules, fan sections, or fan components	64
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	64
G294 Remove or replace engine gearbox modules	62
G210 Inspect engine plumbing	62
G281 Remove or replace engine anti-icing system components	62
G347 Rig afterburner or augmentor systems	61
G207 Inspect engine oil filters	61
G353 Rig RCVV actuators	61
G320 Remove or replace oil cooler assemblies	61
G196 Inspect afterburners or augmentors	61
G290 Remove or replace engine fan ducts	61
G291 Remove or replace engine fuel manifolds or nozzles	57
G298 Remove or replace engine oil system components	55
G265 Prepare engine modules for shipment	55
K580 Remove or replace afterburners or augmentors	52
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	49

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631E ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=91)
G263 Place protective covers on engines	79
G360 Select and use hand tools	73
G359 Seal, plug or cap lines or openings	68
G236 Install engines on transportation stands or trailers	67
G266 Prepare engines for shipment	65
G210 Inspect engine plumbing	64
G191 Drain fuel filters	64
G373 Transfer engines to transportation trailers	60
G207 Inspect engine oil filters	60
F159 Inspect areas for foreign object damage (FOD) items	58
G203 Inspect engine exhaust section components	57
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	57
G179 Blend engine fan blades	55
G289 Remove or replace engine exhaust section components	53
G282 Remove or replace engine bearings	53
G212 Inspect engine trailers or stands	52
R846 Access core automated maintenance system (CAMS) menus and data screens	51
G309 Remove or replace fan blades	49
G374 Transport engines	49
G272 Remove or replace accessory gearbox assembly components	49
E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits	48
G264 Prepare engine components for shipment	47
E124 Inventory equipment or supplies	47

TABLE 13

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A631C AND DAFSC 2A631D ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A631C (N=575)	2A631D (N=127)	DIFFERENCE
G276 Remove or replace constant speed drives (CSDs), integrated drive generators (IDGs), or generators	44	6	38
G364 Service CSD or IDG systems	40	4	36
G187 Connect or disconnect external aircraft power	43	8	35
G323 Remove or replace portions of cowling, nacelles, access doors, or panels	37	4	33
G322 Remove or replace pneumatic starter units	34	2	32
G278 Remove or replace CSD or IDG system components	34	3	31
<hr/>			
G353 Rig RCVV actuators	9	61	-52
G347 Rig afterburner or augmentor systems	10	62	-52
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	15	65	-50
G273 Remove or replace afterburner or augmentor system components	17	66	-49
G324 Remove or replace rear compressor variable vane (RCVV) system components	11	54	-43
G196 Inspect afterburners or augmentors	10	53	-43

TABLE 14

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A631C AND DAFSC 2A631E ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A631C (N=575)	2A631E (N=91)	DIFFERENCE
N712 Remove or replace APU or SGT components	30	1	29
N717 Service APUs or SGTs	26	1	25
G334 Remove or replace thrust reverser assemblies	26	1	25
N714 Remove or replace APUs or SGTs	26	1	25
G224 Inspect thrust reverser system components	26	1	25
G335 Remove or replace thrust reverser assembly components	25	1	24
<hr/>			
G266 Prepare engines for shipment	38	65	-27
G273 Remove or replace afterburner or augmentor system components	17	44	-27
K580 Remove or replace afterburners or augmentors	11	38	-27
G196 Inspect afterburners or augmentors	17	43	-26
K587 Remove or replace engines on maintenance stands and adapters	17	41	-24
G282 Remove or replace engine bearings	31	53	-22

TABLE 15

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A631D AND DAFSC 2A631E ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A631D (N=127)	2A631E (N=91)	DIFFERENCE
G353 Rig RCVV actuators	66	4	62
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	67	7	60
G347 Rig afterburner or augmentor systems	67	13	54
G310 Remove or replace fan modules, fan sections, or fan components	87	37	50
G324 Remove or replace rear compressor variable vane (RCVV) system components	48	3	45
G348 Rig CIVV systems	47	3	44
<hr/>			
G295 Remove or replace engine hydraulic system components	11	42	-31
G276 Remove or replace constant speed drives (CSDs), integrated drive generators (IDGs), or generators	6	35	-30
G191 Drain fuel filters	38	65	-27
G303 Remove or replace engine tail pipes	18	41	-23
E118 Cycle torque wrenches	13	35	-23

Table 16 lists representative tasks for these incumbents. Since the 3-skill level members of this AFSC are divided into three shreds, C, D, and E, and task performance differs between the shreds, a 3-skill level to 5-skill level comparison is not possible for this AFSC. However, a 5- to 7-skill level comparison has been accomplished and will follow in this report.

DAFSC 2A671A. Seven-skill level personnel perform an average of 104 tasks and average over 15 years in the career ladder. The 852 members of this group have grades of Staff Sergeant (11 percent), Technical Sergeant (48 percent), Master Sergeant (39 percent), and Senior Master Sergeant (2 percent). Unlike the 3- and 5-skill level groups, the majority (52 percent) of 7-skill level time is spent on tasks pertaining to duties A through E, supervisory, training, and administration (see Table 9). Representative tasks performed by 7-skill level personnel are listed in Table 17.

Table 18 shows tasks which best distinguish between 5- and 7-skill level members. A higher percentage of 7-skill level members perform those typical supervisory tasks, reflecting the first-line supervisory role of these more senior personnel. Examples of tasks with the greatest difference in members performing include: supervising Aerospace Propulsion Craftsman, Jet Engines (AFSC 2A671A); scheduling leaves; counseling personnel on personal or military matters; inspecting personnel for compliance with performance standards; and conducting supervisory orientations of newly assigned personnel. As Table 18 indicates, 7-skill level personnel are performing some technical tasks, along with those in the supervisory area, but career ladder progression is evident as the majority of their job time is being spent performing supervisory tasks (see Table 9).

DAFSC 2A691. The 61 9-skill level members in the sample survey average performing 66 tasks and almost 20 years in the career ladder. Forty-four percent of these members have a grade of Master Sergeant, while 52 percent are Senior Master Sergeants. Reflecting a much higher level of supervision, 43 of the 61 9-skill level personnel are in the Supervisor Cluster. Table 19 displays representative tasks performed by members of this group.

As Table 9 shows, members of the DAFSC 2A691 group are clearly the upper level supervisors of the career ladder. Seventy-one percent of their job time is spent performing tasks in duties A, B, and C. Because they perform almost purely supervisory tasks, they differ from their 7-skill level counterparts by the percentage performing technical tasks (see Table 20).

AFSC 2A6X1B

Table 21 displays the distribution of the AFSC 2A6X1B skill-level group across career ladder clusters and jobs. As expected, almost all DAFSC 2A631B, 2A651B, and 2A671B personnel perform jobs that pertain to the maintenance of turboprop engines and propellers.

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651A ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=1,857)
G210 Inspect engine plumbing	71
G360 Select and use hand tools	69
G207 Inspect engine oil filters	67
G179 Blend engine fan blades	66
G213 Inspect engines before and after operation	65
G263 Place protective covers on engines	65
G359 Seal, plug or cap lines or openings	65
G300 Remove or replace engine plumbing	65
G203 Inspect engine exhaust section components	63
G214 Inspect fuel filters	63
G298 Remove or replace engine oil system components	63
G206 Inspect engine magnetic chip detectors	63
G236 Install engines on transportation stands or trailers	62
G204 Inspect engine fan section components	62
F159 Inspect areas for foreign object damage (FOD) items	60
G212 Inspect engine trailers or stands	59
G281 Remove or replace engine anti-icing system components	57
G373 Transfer engines to transportation trailers	55
G200 Inspect engine compressors	53
G211 Inspect engine stator vanes	53
G238 Leak check operating engines	52
G261 Perform rigid borescope inspections of engines	52
R846 Access core automated maintenance system (CAMS) menus and data screens	52
G365 Service engine oil systems	52
D93 Conduct OJT	49
A1 Assign maintenance and repair work	48

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671A ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=852)
C84 Write enlisted performance reports	73
B31 Counsel personnel on personal or military-related matters	71
A8 Determine work priorities	70
C63 Conduct performance feedback worksheet sessions	67
A1 Assign maintenance and repair work	66
C85 Write recommendations for awards and decorations	65
C80 Inspect personnel for compliance with military standards	64
A20 Plan or schedule work assignments	60
A21 Plan or schedule work priorities	60
C70 Evaluate personnel for compliance with performance standards or TOs	58
D88 Annotate training records	57
F159 Inspect areas for foreign object damage (FOD) items	55
A17 Establish performance standards for subordinates	55
B47 Interpret policies, directives, or procedures for subordinates	54
B56 Supervise Aerospace Propulsion Journeyman, Jet Engines (AFSC 2A651A)	53
A2 Assign personnel to duty positions	52
A5 Coordinate work on engine components with appropriate agencies	50
D93 Conduct OJT	49
A24 Schedule leaves	49
B54 Supervise Aerospace Propulsion Craftsman, Jet Engines (AFSC 2A671A)	49
R846 Access core automated maintenance system (CAMS) menus and data screens	48
B28 Adjust daily maintenance plans to meet operational commitments	40
A6 Determine logistics requirements, such as space, personnel, or equipment	39
B59 Supervise military personnel with AFSCs other than 2A6X1A/B	35
A18 Plan briefings	33
B33 Direct flightline maintenance activities	30

TABLE 18

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651A AND DAFSC 2A671A ACTIVE-DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651A (N=1,857)	2A671A (N=852)	DIFFERENCE
G179 Blend engine fan blades	66	35	31
G359 Seal, plug, or cap lines or openings	65	35	30
G214 Inspect fuel filters	63	34	29
G300 Remove or replace engine plumbing	65	36	29
G298 Remove or replace engine oil system components	63	34	29
G281 Remove or replace engine anti-icing system components	57	29	28
<hr/>			
B54 Supervise Aerospace Propulsion Craftsman, Jet Engines (AFSC 2A671A)	10	49	-39
A24 Schedule leaves	11	49	-38
C85 Write recommendations for awards and decorations	27	65	-38
B31 Counsel personnel on personal or military-related matters	35	71	-36
C80 Inspect personnel for compliance with military standards	29	64	-35
B30 Conduct supervisory orientations of newly assigned personnel	16	50	-34

TABLE 19

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A691 ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=61)
B31 Counsel personnel on personal or military-related matters	75
A8 Determine work priorities	74
B47 Interpret policies, directives, or procedures for subordinates	72
C85 Write recommendations for awards and decorations	72
C84 Write enlisted performance reports	69
C80 Inspect personnel for compliance with military standards	66
A24 Schedule leaves	64
B28 Adjust daily maintenance plans to meet operational commitments	64
A18 Plan briefings	64
B41 Implement safety or security programs	62
A6 Determine logistics requirements, such as space, personnel, or equipment	62
C70 Evaluate personnel for compliance with performance standards or TOs	62
B40 Implement cost-reduction programs	62
B29 Conduct staff meetings	61
A21 Plan or schedule work priorities	61
A16 Establish organizational policies	61
C73 Evaluate suggestions	61
C77 Indorse enlisted performance reports	59
A10 Develop inspection procedures	57
B32 Direct development of status indicators, such as boards, graphs, or charts	56
C86 Write staff studies, surveys, or special reports, other than training reports	56
A12 Develop quality assurance programs	54
C74 Evaluate TO improvement reports	54
C72 Evaluate safety or security programs	54
C63 Conduct performance feedback worksheet sessions	67

TABLE 20

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A671A AND DAFSC 2A691 ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A671A (N=852)	2A691 (N=61)	DIFFERENCE
G210 Inspect engine plumbing	45	8	37
G213 Inspect engines before and after operation	40	5	35
G236 Install engines on transportation stands or trailers	37	3	34
G300 Remove or replace engine plumbing	36	2	34
B56 Supervise Aerospace Propulsion Journeyman, Jet Engines, (AFSC 2A651A)	53	20	33
G203 Inspect engine exhaust section components	40	6	34
<hr/>			
B40 Implement cost -reduction programs	16	62	-46
B29 Conduct staff meetings	20	61	-41
A15 Draft budget requirements	12	53	-41
A16 Establish organizational policies	21	61	-40
C86 Write staff studies, surveys, or special reports, other than training reports	22	56	-34

TABLE 21
DISTRIBUTION OF AFSC 2A6X1B SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (ACTIVE DUTY)

JOB	2A631B (N=201)	2A651B (N=329)	2A671B (N=152)
APPRENTICE F100 ENGINE MAINTENANCE JOB	0	0	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	0	2	0
CUT CREW CHIEF JOB	0	1	0
INSPECTION JOB	3	1	0
IN-SHOP CLUSTER	9	18	4
TEST CELL CLUSTER	1	1	1
GENERAL ENGINE MAINTENANCE CLUSTER	81	209	59
SECTION NCOIC JOB	0	2	3
JUNIOR TURBOPROP JOB	41	8	0
CAMS CLUSTER	1	6	4
MODULAR ENGINE REPAIR JOB	0	0	0
IN-SHOP PROPELLER JOB	19	19	5
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	1	10	1
FLIGHTLINE EXPEDITOR JOB	0	1	2
QUALITY ASSURANCE INSPECTOR JOB	0	1	9
SUPERVISORS CLUSTER	0	2	34
INSTRUCTOR JOB	0	5	2
MATERIAL SUPPORT JOB	2	3	6
ENGINE MANAGEMENT JOB	0	1	0
EQUIPMENT MANAGEMENT JOB	3	6	0
NOT GROUPED	40	33	22

Career ladder progression is typical in this AFSC, as it was in the 2A6X1A AFSC, and this progression can be seen in Table 22. Three- and 5-skill level members spend more time in duties G and H than in supervisory duties A, B, and C. Seven-skill level members in AFSC 2A671B spend half of their time performing supervisory functions and in duties E and F (6 and 5 percent respectively), and they are also spending 50 percent of their time performing tasks pertaining to technical procedures in duties G through R. Discussed below are specific skill-level descriptions.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A631B. The 201 members of this group perform an average of 123 tasks and average less than 2 years in the career ladder. They have an average paygrade of E-3. Table 21 shows that 81 members in this group are in the General Engine Maintenance Cluster, and 77 of these 81 personnel are in the Turboprop Maintenance Job found in this cluster. An additional 41 members are in the Junior Turboprop Job, with another 19 performing in the In-Shop Propeller Job. While indicating they spend 49 percent of their time on tasks pertaining to general aircraft engine maintenance (see Table 22), AFSC 2A631B personnel also spend 16 percent of job time performing general propeller maintenance functions. Table 23 shows these group members performing tasks such as removing or replacing propeller brush blocks, removing or replacing front spinner cones (noses), removing or replacing propeller anti-icing afterbodies, and adjusting propeller blade angles.

DAFSC 2A651B. Five-skill level members of the 2A6X1B career ladder comprise the largest skill-level group in the career ladder. The 329 members holding the 5-skill level have an average of just over 8 years in the career ladder. Forty-one percent are Senior Airmen/Sergeants, while 51 percent hold the rank of Staff Sergeant. As expected, 75 percent of the members of this group indicate they are maintaining the T56-A-7/1521 engines found in C-130 aircraft, and another 10 percent are maintaining the T64-GE-100 engine of the MH-53J helicopter. Like their 3-skill level counterparts, they spend the majority of their job time in duties G through L (see Table 22), with a small amount of time being spent on supervisory duties. Table 24 lists representative tasks for these members. DAFSC 2A631B skill-level members perform many of the same technical tasks as their 5-skill level counterparts (see Table 25). The difference between the two is indicated by some supervisory task performance by 2A651B group members

DAFSC 2A671B. Seven-skill level personnel average over 14 years in the career ladder and perform an average of 152 tasks. The 152 members of this group hold grades that range from Staff Sergeant to Master Sergeant. Although most of their job time is involved with performing supervisory duties, they indicate spending some time performing technical tasks in duties G through R as well (see Table 26). Representative tasks performed by members of this group are listed in Table 26.

TABLE 22

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1B SKILL-LEVEL GROUPS
 (ACTIVE DUTY)
 (RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	DAFSC 2A631B (N=201)	DAFSC 2A651B (N=329)	DAFSC 2A671B (N=152)
A ORGANIZING AND PLANNING	1	3	12
B DIRECTING AND IMPLEMENTING	*	4	10
C INSPECTING AND EVALUATING	*	2	11
D TRAINING	*	4	6
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	3	4	6
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2	2	5
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	49	39	22
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	16	12	8
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	5	5	3
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	3	3	2
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	4	3	1
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	7	3	1
M PERFORMING TEST CELL FUNCTIONS	1	1	1
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	1	2	1
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*	1	2
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	1	2	1
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	3	3	2
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	3	7	6

* INDICATES LESS THAN 1 PERCENT

TABLE 23

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631B ACTIVE DUTY PERSONNEL

		PERCENT MEMBERS PERFORMING (N=201)
<u>TASKS</u>		
H450	Remove or replace propeller brush blocks	75
H444	Remove or replace front spinner cones (noses)	72
G207	Inspect engine oil filters	72
G298	Remove or replace engine oil system components	69
G360	Select and use hand tools	69
G359	Seal, plug or cap lines or openings	68
G214	Inspect fuel filters	68
G236	Install engines on transportation stands or trailers	67
G303	Remove or replace engine tail pipes	67
H449	Remove or replace propeller anti-icing afterbodies	65
G188	Connect or disconnect test equipment to engines	65
G365	Service engine oil systems	65
G187	Connect or disconnect external aircraft power	62
H423	Adjust propeller blade angles	62
G292	Remove or replace engine fuel system components, other than fuel manifolds or nozzles	62
G172	Adjust engine system components	60
H461	Rework propeller blade nicks, burrs, or scratches	59
G213	Inspect engines before and after operation	59
G210	Inspect engine plumbing	57
G185	Clean engines	57
G323	Remove or replace portions of cowling, nacelles, access doors, or panels	57
G206	Inspect engine magnetic chip detectors	56
R846	Access core automated maintenance system (CAMS) menus and data screens	56
H430	Drain hydraulic oil from propeller components	56
G263	Place protective covers on engines	55

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651B ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=329)
G210 Inspect engine plumbing	75
G207 Inspect engine oil filters	73
G298 Remove or replace engine oil system components	73
G360 Select and use hand tools	71
R846 Access core automated maintenance system (CAMS) menus and data screens	70
G200 Inspect engine compressors	70
G213 Inspect engines before and after operation	70
G365 Service engine oil systems	69
G203 Inspect engine exhaust section components	69
G214 Inspect fuel filters	69
G188 Connect or disconnect test equipment to engines	69
G202 Inspect engine electrical components	68
G201 Inspect engine controls	68
G350 Rig engine control linkages	66
G351 Rig engine throttle control systems	66
G359 Seal, plug or cap lines or openings	66
H450 Remove or replace propeller brush blocks	65
G187 Connect or disconnect external aircraft power	64
G172 Adjust engine system components	64
R849 Change CAMS workcenter event narratives	63
F159 Inspect areas for foreign object damage (FOD) items	63
G206 Inspect engine magnetic chip detectors	62
R848 Change CAMS performing workcenter codes	53
R859 Document maintenance actions	53

TABLE 25

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A631B AND DAFSC 2A651B ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A631B (N=201)	2A651B (N=329)	DIFFERENCE
H444 Remove or replace front spinner cones (noses)	72	60	12
H450 Remove or replace propeller brush blocks	75	65	10
H449 Remove or replace propeller anti-icing afterbodies	65	62	2
H458 Remove or replace valve housings	64	63	1
H461 Rework propeller blade nicks, burrs, or scratches	59	58	1
G303 Remove or replace engine tail pipes	67	67	0
<hr/>			
C84 Write enlisted performance reports	2	46	-44
C63 Conduct performance feedback worksheet sessions	3	43	-40
D88 Annotate training records	8	48	-40
D96 Counsel trainees on training progress	4	42	-38
B31 Counsel personnel on personal or military-related matters	5	41	-36

TABLE 26

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671B ACTIVE DUTY PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=152)
C84 Write enlisted performance reports	72
C85 Write recommendations for awards and decorations	71
B31 Counsel personnel on personal or military-related matters	70
C80 Inspect personnel for compliance with military standards	68
A8 Determine work priorities	67
C63 Conduct performance feedback worksheet sessions	66
A1 Assign maintenance and repair work	66
F159 Inspect areas for foreign object damage (FOD) items	61
R846 Access core automated maintenance system (CAMS) menus and data screens	60
A20 Plan or schedule work assignments	59
C70 Evaluate personnel for compliance with performance standards or TOs	58
B47 Interpret policies, directives, or procedures for subordinates	57
A21 Plan or schedule work priorities	56
F157 Evaluate in-process maintenance	55
A17 Establish performance standards for subordinates	54
B55 Supervise Aerospace Propulsion Craftsman, Turboprop and Turboshaft (AFSC 2A6X1B)	51
F158 Evaluate safety procedures	50
A2 Assign personnel to duty positions	49
A24 Schedule leaves	48
C78 Inspect flightline maintenance actions	47
B59 Supervise military personnel with AFSCs other than 2A6X1A/B	47
F161 Perform activity inspections, such as self-inspections or quality assessment programs	45
C61 Analyze workload requirements	42
A6 Determine logistics requirements, such as space, personnel, or equipment	39
F167 Review TO changes	37
F156 Coordinate quality assurance problems with maintenance personnel	36

Table 27 shows a higher percentage of 5-skill level personnel perform technical tasks, while a higher percentage of 7-skill level personnel perform supervisory tasks. Satisfactory career ladder progression is evident for the "B" shred AFSC.

AFRES

AFSC 2A6X1A

The distribution of AFSC 2A6X1A skill-level groups across career ladder clusters and jobs for AFRES personnel is displayed in Table 28. As can be seen, 11 of the 25 DAFSC 2A631C members are performing in the In-Shop Cluster, while the majority of DAFSC 2A651A personnel are in the General Engine Maintenance and In-Shop clusters. DAFSC 2A671A AFRES members are spread between all clusters and jobs, except the Junior Turboprop and Modular Engine Repair Jobs. The other two 3-skill levels, DAFSC 2A631D and 2A631E, do not contain AFRES members. As AFRES personnel progress through the career ladder, their job remains technical up through the 7-skill level, as indicated by only 21 of the 238 members performing in the Supervisor Cluster and 6 of the 238 personnel in the Section NCOIC Job. This does not mean that some 7-skill level personnel are not in supervisory positions within the other clusters and jobs. The shift to purely supervisory functions for AFRES members occurs at DAFSC 2A691 (see Table 29). Thus, career ladder progression is atypical for AFRES personnel in this AFSC.

Table 29 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. As shown, 3- and 5-skill level personnel have little to do with supervisory functions (duties A, B, and C), and 7-skill level members are not spending a great deal of time in these supervisory duties. As can be seen in the table, members of 3-, 5-, and 7-skill levels spend the largest amount of their time in duty G, General Aircraft Engine Maintenance. This duty represents the essence of the job being performed by AFRES members of the Aerospace Propulsion Jet Engine AFSC. The bulk of 9-skill level members' time is being spent performing supervisory functions. Specific skill-level group discussions are presented below.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A631C. Eighty percent of the members of the AFRES "C" shred 3-skill level group hold the grade of Staff Sergeant. Table 28 shows that 11 of the 25 members in this group perform in the In-Shop Cluster. Seventy-one percent of their job time is spent performing tasks that pertain to performing general aircraft engine maintenance functions, while another 6 percent is spent in the in-shop area (see Table 29). As shown in Table 30, representative tasks these

TABLE 27

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651B AND DAFSC 2A671B ACTIVE DUTY PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651B (N=329)	2A671B (N=152)	DIFFERENCE
G298 Remove or replace engine oil system components	73	41	32
G188 Connect or disconnect test equipment to engines	69	39	30
G303 Remove or replace engine tail pipes	67	38	29
G300 Remove or replace engine plumbing	69	41	28
G203 Inspect engine exhaust section components	69	41	28
G314 Remove or replace ignition system components	61	33	28
<hr/>			
C85 Write recommendations for awards and decorations	28	71	-43
C80 Inspect personnel for compliance with military standards	30	68	-38
B55 Supervise Aerospace Propulsion Craftsman, Turboprop and Turboshaft (AFSC 2A671B)	14	51	-37
A24 Schedule leaves	11	48	-37
F157 Evaluate in-process maintenance	23	55	-32

TABLE 28

**DISTRIBUTION OF AFSC 2A6X1A SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (AFRES)**

JOB	2A63 IC (N=25)	2A651 A (N=413)	2A671 A (N=238)	2A691 (N=20)
APPRENTICE F100 ENGINE MAINTENANCE JOB	0	2	1	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	0	7	4	0
CUT CREW CHIEF JOB	0	12	3	0
INSPECTION JOB	2	46	11	0
IN-SHOP CLUSTER	11	108	37	0
TEST CELL CLUSTER	0	6	10	0
GENERAL ENGINE MAINTENANCE CLUSTER	1	131	79	1
SECTION NCOIC JOB	0	1	6	0
JUNIOR TURBOPROP JOB	0	0	0	0
CAMS CLUSTER	1	7	5	0
MODULAR ENGINE REPAIR JOB	0	0	0	0
IN-SHOP PROPELLER JOB	0	0	1	0
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	0	0	2	0
FLIGHTLINE EXPEDITOR JOB	0	0	1	0
QUALITY ASSURANCE INSPECTOR JOB	0	0	5	0
SUPERVISORS CLUSTER	0	1	21	17
INSTRUCTOR JOB	0	1	5	0
MATERIAL SUPPORT JOB	0	2	1	0
ENGINE MANAGEMENT JOB	1	2	6	0
EQUIPMENT MANAGEMENT JOB	0	1	1	0
NOT GROUPED	9	86	39	2

TABLE 29

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1A SKILL-LEVEL GROUPS
 (AFRES)
 (RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	DAFSC 2A631C (N=25)	DAFSC 2A651A (N=413)	DAFSC 2A671A (N=238)	DAFSC 2A691 (N=91)
A ORGANIZING AND PLANNING	1	2	7	26
B DIRECTING AND IMPLEMENTING	*	2	7	21
C INSPECTING AND EVALUATING	*	1	5	24
D TRAINING	0	2	6	5
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	1	3	3	5
F PERFORMING QUALITY ASSURANCE FUNCTIONS	3	2	4	8
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	71	66	46	5
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	0	*	*	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	3	4	4	*
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	0	*	*	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	6	6	4	*
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	0	*	*	*
M PERFORMING TEST CELL FUNCTIONS	1	1	2	*
N MAINTAINING AUXILIARY POWER UNITS(APUs) OR SMALL GAS TURBINE (SGT) ENGINES	1	3	2	*
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	3	1	3	3
P MAINTAINING NINPOWERED ENGINE SUPPORT EQUIPMENT	2	1	1	*
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	5	3	2	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	2	2	3	2

* INDICATES LESS THAN 1 PERCENT

TABLE 30

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631C AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=25)
G263 Place protective covers on engines	76
G214 Inspect fuel filters	76
G360 Select and use hand tools	72
G210 Inspect engine plumbing	72
G212 Inspect engine trailers or stands	72
G236 Install engines on transportation stands or trailers	72
G359 Seal, plug or cap lines or openings	68
G207 Inspect engine oil filters	68
G206 Inspect engine magnetic chip detectors	68
G266 Prepare engines for shipment	68
G310 Remove or replace fan modules, fan sections, or fan components	64
G188 Connect or disconnect test equipment to engines	64
G300 Remove or replace engine plumbing	64
G296 Remove or replace engine magnetic chip detectors	60
G179 Blend engine fan blades	60
G191 Drain fuel filters	56
G365 Service engine oil systems	56
G261 Perform rigid borescope inspections of engines	56
F159 Inspect areas for foreign object damage (FOD) items	52
G256 Perform flex borescope inspections of engines	52
G187 Connect or disconnect external aircraft power	52
Q812 Launch or recover aircraft	48
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	48
G189 Drain or flush engine oil systems	48

members perform include: inspecting fuel filters, engine plumbing, engine trailers or stands, and preparing engines for shipment. Unlike their Active Duty 3-skill level "C" shred counterparts who perform maintenance mainly on nonafterburning or nonaugmenting engines, AFRES 3-skill level members are maintaining a variety of aircraft engines, including afterburning and augmenting engines. For example, 56 percent indicate they maintain the F100-PW-220 engine (F-15/F-16 aircraft), 20 percent maintain the TF34-GE-100A engine (OA/A-10A aircraft), while 16 percent maintain the TF39-GE-1C engine (C-5A/B aircraft). These engines and aircraft represent the varied missions of AFRES.

DAFSC 2A651A. AFRES 5-skill level members, like their Active Duty counterparts, comprise the largest skill-level group in this career ladder. Over three quarters (77 percent) of these members are Staff Sergeants. As with the AFRES 3-skill level members, the biggest group of 5-skill level airmen (131) are members of the General Engine Maintenance Cluster (see Table 28). DAFSC 2A651A members indicate they spend 66 percent of their time on task performance in general aircraft engine maintenance functions (see Table 29), and spend very little time in each of the remaining duties. Table 31 lists representative tasks for these incumbents. Since AFRES 3-skill level members only have the "C" shred, a 3-skill level to 5-skill level comparison is not possible for this AFSC. However, a 5-to 7-skill level comparison has been accomplished.

DAFSC 2A671A. The 238 members of this group have grades of Staff Sergeant (5 percent), Technical Sergeant (62 percent), Master Sergeant (32 percent), and Senior Master Sergeant (1 percent). Unlike their Active Duty 7-skill level counterparts, the majority (71 percent) of this group's time is spent on technical tasks in duties G through R, while only 19 percent of time is involved with supervisory functions (see Table 29). Representative tasks performed by 7-skill level personnel are listed in Table 32. Examples of technical tasks performed by AFRES 7-skill level personnel include inspecting engine plumbing, engine oil filters, and engine exhaust section components, plus blending fan blades.

Table 33 shows tasks which best distinguish between 5- and 7-skill level members. A slightly higher percentage of 7-skill level members perform those typical supervisory tasks, reflecting the first-line supervisory role of these more senior personnel. Examples of tasks with the greatest difference in members performing include counseling personnel on personal or military-related matters, assigning personnel to duty positions, planning or scheduling work assignments, and assigning maintenance and repair work. However, as Table 33 indicates, a high percentage of 7-skill level personnel are performing technical tasks, along with 5-skill level AFRES members. For this reason, AFRES career ladder progression is atypical, as normally there should be a higher increase in supervisory task performance by 7-skill level personnel.

DAFSC 2A691. Ten percent of the 20 group members have a grade of Master Sergeant, 85 percent are Senior Master Sergeants, while 5 percent are Chief Master Sergeants. Reflecting a much higher level of supervision, Table 28 indicates 17 9-skill level personnel are in the Supervisor Cluster. Table 34 displays representative tasks performed by members of this group.

TABLE 31

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651A AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=413)
G210 Inspect engine plumbing	83
G300 Remove or replace engine plumbing	81
G360 Select and use hand tools	79
G207 Inspect engine oil filters	77
G263 Place protective covers on engines	77
G203 Inspect engine exhaust section components	75
G359 Seal, plug or cap lines or openings	74
G204 Inspect engine fan section components	74
G236 Install engines on transportation stands or trailers	74
G212 Inspect engine trailers or stands	74
G214 Inspect fuel filters	73
G191 Drain fuel filters	72
G179 Blend engine fan blades	71
G211 Inspect engine stator vanes	70
G298 Remove or replace engine oil system components	69
G365 Service engine oil systems	67
G213 Inspect engines before and after operation	65
G281 Remove or replace engine anti-icing system components	64
G200 Inspect engine compressors	62
G373 Transfer engines to transportation trailers	62
G198 Inspect engine bleed valves and actuators	62
G189 Drain and flush engine oil systems	61
G199 Inspect engine combustion sections	60
G323 Remove or replace portions of cowling, nacelles, access doors, or panels	60
G205 Inspect engine hydraulic systems	60

TABLE 32
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671A AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=238)
G210 Inspect engine plumbing	74
G207 Inspect engine oil filters	70
G263 Place protective covers on engines	65
G214 Inspect engine oil filters	65
G203 Inspect engine exhaust section components	65
G179 Blend engine fan blades	65
G204 Inspect engine fan section components	65
G360 Select and use hand tools	63
G300 Remove or replace engine plumbing	62
G213 Inspect engines before and after operation	62
G212 Inspect engine trailers or stands	62
F159 Inspect areas for foreign object damage (FOD) items	62
A1 Assign maintenance and repair work	61
G373 Transfer engines to transportation dollies	60
G365 Service engine oil systems	59
G359 Seal, plug, or cap lines or openings	58
G191 Drain fuel filters	58
G211 Inspect engine stator vanes	57
D93 Conduct OJT	56
G200 Inspect engine compressors	55
A8 Determine work priorities	53
F160 Inspect engines or associated equipment for corrosion	51
G206 Inspect engine magnetic chip detectors	50
A2 Assign personnel to duty positions	49
G189 Drain and flush engine oil systems	48

TABLE 33

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651A AND DAFSC 2A671A AFRES PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651A (N=413)	2A671A (N=238)	DIFFERENCE
G203 Inspect engine exhaust section components	75	65	9
G204 Inspect engine fan section components	74	65	9
G210 Inspect engine plumbing	83	74	9
G214 Inspect fuel filters	73	65	8
G207 Inspect engine oil filters	77	70	7
G179 Blend engine fan blades	71	66	5
<hr/>			
B31 Counsel personnel on personal or military-related matters	12	45	-33
A2 Assign personnel to duty positions	16	49	-33
A20 Plan or schedule work assignments	16	48	-32
A1 Assign maintenance and repair work	30	61	-31
A1 Plan or schedule work priorities	13	43	-30
A8 Determine work priorities	24	53	-29

TABLE 34
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A691 AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=20)
A20 Plan or schedule work assignments	95
B31 Counsel personnel on personal or military-related matters	95
A2 Assign personnel to duty positions	95
B47 Interpret policies, directives, or procedures for subordinates	90
A8 Determine work priorities	90
A1 Assign maintenance and repair work	90
B42 Implement self-inspection programs	90
B28 Adjust daily maintenance plans to meet operational commitments	85
A21 Plan or schedule work priorities	85
F158 Evaluate safety procedures	85
A13 Develop self-inspection programs	85
B41 Implement safety or security programs	80
C71 Evaluate personnel for promotion, demotion, or reclassification	80
A18 Plan briefings	80
A3 Assign sponsors for newly assigned personnel	80
C85 Write recommendations for awards and decorations	80
C70 Evaluate personnel for compliance with performance standards or TOs	80
B50 Report engine status	80
A24 Schedule leaves	80
B34 Direct in-shop maintenance activities	75
A17 Establish performance standards for subordinates	75
A5 Coordinate work on engine components with appropriate agencies	75
B30 Conduct supervisory orientation of newly assigned personnel	75
B58 Supervise civilian personnel	70
F156 Coordinate quality assurance problems with maintenance personnel	70

As Table 29 shows, members of the AFRES DAFSC 2A691 group are clearly the supervisors of the career ladder. Seventy-one percent of their job time is spent performing tasks in duties A, B, and C. In addition, they indicate spending another 6 percent of their time performing quality assurance functions and 3 percent in engine management functions. Because they perform almost purely supervisory tasks, they differ from their 7-skill level counterparts by indicating a small amount of technical task performance (see Table 34). Although 7-skill level personnel perform some supervisory tasks, Table 35 clearly shows a higher percentage of the 9-skill level members are performing the same tasks. Examples of these higher performance supervisory tasks are: implement self-inspections, evaluate maintenance or use of workspace, equipment, or supplies, and schedule leaves.

AFSC 2A6X1B

Table 36 displays the distribution of AFRES AFSC 2A6X1B skill-level group across career ladder clusters and jobs. Only three of the six DAFSC 2A631B personnel grouped in the survey sample and two of them are performing in the In-Shop Propeller Job, while the third member is in the General Maintenance Cluster. DAFSC 2A651B and 2A671B personnel perform jobs in the General Engine Maintenance Cluster that pertain to the maintenance of turboprop engines and propellers. Career ladder progression is atypical in this AFSC, as it was in the AFRES 2A6X1A AFSC, and this lack of normal progression can be seen in Table 37. Three- and 5 skill-level members spend more time in duties G, H, and L, than in supervisory duties A, B, and C. Seven-skill level members in AFSC 2A671B are only spending 9 percent of their time performing supervisory functions and in duties E and F (6 percent in each duty), while the majority of their time is being spent performing technical tasks in duties G through R. Discussed below are specific skill-level descriptions.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A631B. The six members of this group have an average grade of Senior Airman/Sergeant. Table 36 shows that two of the three members in this group (that grouped in clusters and jobs) are in the In-Shop Propeller Job. While indicating they spend 43 percent of their time (see Table 37) on tasks pertaining to general aircraft engine maintenance, AFRES AFSC 2A631B personnel also spend 19 percent of job time performing general propeller maintenance functions, and 18 percent on in-shop maintenance on propellers. Table 38 shows members performing tasks such as: assembling or disassembling brush block assemblies, removing or replacing rear spinners, torquing propellers on engine shafts, removing or replacing propeller anti-icing afterbodies, and soldering propeller brush block assemblies.

TABLE 35

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A671A AND DAFSC 2A691 AFRES PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A671A (N=238)	2A691 (N=20)	DIFFERENCE
G179 Blend engine fan blades	66	10	56
G373 Transfer engines to transportation trailers	60	5	55
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	51	0	51
G214 Inspect fuel filters	65	15	50
G207 Inspect engine oil filters	70	20	50
G204 Inspect engine fan section components	65	15	50
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B42 Implement self-inspections	23	90	-67
C69 Evaluate maintenance or use of workspace, equipment, or supplies	18	85	-67
A24 Schedule leaves	15	80	-65
B28 Adjust daily maintenance plans to meet operational commitments	21	85	-64
E116 Annotate civilian attendance sheets	13	75	-62
C76 Indorse civilian performance appraisals	8	70	-62

TABLE 36
DISTRIBUTION OF AFSC 2A6X1B SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (AFRES)

<u>JOB</u>	2A631B (N=6)	2A651B (N=79)	2A671B (N=62)
APPRENTICE F100 ENGINE MAINTENANCE JOB	0	0	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	0	0	0
CUT CREW CHIEF JOB	0	0	0
INSPECTION JOB	0	0	0
IN-SHOP CLUSTER	0	2	1
TEST CELL CLUSTER	0	0	0
GENERAL ENGINE MAINTENANCE CLUSTER	1	52	43
SECTION NCOIC JOB	0	5	1
JUNIOR TURBOPROP JOB	0	2	3
CAMS CLUSTER	0	6	1
MODULAR ENGINE REPAIR JOB	0	0	0
IN-SHOP PROPELLER JOB	2	2	2
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	0	0	0
FLIGHTLINE EXPEDITOR JOB	0	0	0
QUALITY ASSURANCE INSPECTOR JOB	0	0	3
SUPERVISORS CLUSTER	0	0	0
INSTRUCTOR JOB	0	0	0
MATERIAL SUPPORT JOB	0	0	0
ENGINE MANAGEMENT JOB	0	0	0
EQUIPMENT MANAGEMENT JOB	0	0	0
NOT GROUPED	3	10	8

TABLE 37

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1B SKILL-LEVEL GROUPS (AFRES)
(RELATIVE PERCENT OF JOB TIME)

DUTIES	DAFSC 2A631B (N=6)	DAFSC 2A651B (N=79)	DAFSC 2A671B (N=62)
A ORGANIZING AND PLANNING	0	1	3
B DIRECTING AND IMPLEMENTING	0	1	4
C INSPECTING AND EVALUATING	0	*	2
D TRAINING	0	1	2
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	1	2	3
F PERFORMING QUALITY ASSURANCE FUNCTIONS	0	2	3
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	43	45	40
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	19	13	11
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	3	5	4
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	4	3	3
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	4	9	6
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	18	8	7
M PERFORMING TEST CELL FUNCTIONS	2	2	2
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	*	2	2
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*	1	1
P MAINTAINING NINPOWERED ENGINE SUPPORT EQUIPMENT	4	3	2
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	1	1	1
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	*	2	2

* INDICATES LESS THAN 1 PERCENT

TABLE 38

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A631B AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=6)
L618 Assemble or disassemble brush block assemblies	100
L661 Remove or replace rear spinners	100
H465 Torque propellers on engine shaft	100
H449 Remove or replace propeller anti-icing afterbodies	100
L664 Solder propeller brush block assemblies	100
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	100
G185 Clean engines	100
J520 Remove or replace propellers on aircraft	83
H432 Inspect propellers or related components	83
H450 Remove or replace propeller brush blocks	83
J521 Service propeller systems	83
H440 Remove or replace dome shells	83
G365 Service engine oil systems	83
G206 Inspect engine magnetic chip detectors	83
G191 Drain fuel filters	83
G212 Inspect engine trailers or stands	83
P790 Clean engine trailers or stands	83
G298 Remove or replace engine oil system components	83
L660 Remove or replace propellers on assembly stands	83
G207 Inspect engine oil filters	83
L640 Leak check propeller assemblies	83
G291 Remove or replace engine fuel manifolds or nozzles	83
G300 Remove or replace engine plumbing	83
H456 Remove or replace pump housings	83
L653 Remove or replace propeller blade deicing brush block assembly components	83

DAFSC 2A651B. AFRES 5-skill level members of the 2A6X1B career ladder comprise the largest group in the career ladder. Fifteen percent hold the rank of Senior Airmen/Sergeants, while 58 percent are Staff Sergeants. As expected, 91 percent of the members of this group indicate they are maintaining the T56-A-7/1521 engines found in C-130 aircraft, but unlike their Active Duty counterparts who indicate they maintain the T64-GE-100 engine of the MH-53J helicopter, 8 percent of these AFRES 5-skill level members are maintaining the T700-GE-700/701C engine found on the HH-60G helicopter. Like their 3-skill level counterparts, they spend the majority of their job time in duties G through L (see Table 37), with a small amount of time being spent on supervisory duties. Table 39 lists representative tasks for these members. Because there were only six AFRES 3-skill level members in the survey sample, a satisfactory comparison to the 5-skill level could not be accomplished.

DAFSC 2A671B. The 62 members of this group hold grades that range from Staff Sergeant to Master Sergeant with the majority being Technical Sergeants (69 percent). Unlike their Active Duty counterparts, most of their job time is not involved with performing supervisory duties, but on technical task performance. Table 37 shows these AFRES 7-skill level personnel spending the majority of time on duties G through L. Hence, their job is highly technical and career ladder progression to the supervisory functions is not present. Representative tasks performed by members of this group are listed in Table 40.

Table 41 shows a higher percentage of 5-skill level personnel perform technical tasks, but only on some tasks, as a higher percentage of 7-skill level members indicate performing tasks such as inspecting engine plumbing and removing or replacing engine plumbing, than their 5-skill level coworkers. This reinforces the atypical career ladder progression for these AFRES 7-skill level members.

ANG

AFSC 2A6X1A

According to the AFPC Master Personnel File, from which the Unit Airman Record is extracted, the ANG has no DAFSC 2A631A/B authorizations. Consequently, 3-skill level data is not available for ANG DAFSC analysis. The distribution of AFSC 2A6X1A 5- and 7-skill level groups across career ladder clusters and jobs for ANG personnel is displayed in Table 42. The majority of DAFSC 2A651A and 2A671A personnel are in the In-Shop and General Engine Maintenance clusters. As with their counterparts in AFRES, their career ladder progression is technical in nature up through the 7-skill level. Twenty-five 2A671A ANG personnel are in the

TABLE 39

REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651B AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=79)
G303 Remove or replace engine tail pipes	85
H450 Remove or replace propeller brush blocks	85
G214 Inspect fuel filters	84
G191 Drain fuel filters	82
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	81
G185 Clean engines	81
G210 Inspect engine plumbing	81
G188 Connect or disconnect test equipment to engines	81
H444 Remove or replace front spinner cones (noses)	81
G236 Install engines on transportation stands or trailers	80
H461 Rework propeller blade nicks, burrs, or scratches	80
G207 Inspect engine oil filters	80
G203 Inspect engine exhaust section components	77
G365 Service engine oil systems	83
H430 Drain hydraulic oil from propeller components	77
G365 Service engine oil systems	77
G206 Inspect engine magnetic chip detectors	77
G300 Remove or replace engine plumbing	76
G373 Transfer engines to transportation trailers	76
J520 Remove or replace propellers on aircraft	76
G312 Remove or replace gearbox assemblies	75
H449 Remove or replace propeller anti-icing afterbodies	75
G323 Remove or replace portions of cowling, nacelles, access doors, or panels	73
G271 Remove or replace accessory gearbox assemblies	71
K531 Assemble or disassemble turbine unit assemblies	68

TABLE 40
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671B AFRES PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=62)
G210 Inspect engine plumbing	87
G212 Inspect engine trailers or stands	84
G303 Remove or replace engine tail pipes	82
G214 Inspect fuel filters	82
G207 Inspect engine oil filters	82
G236 Install engines on transportation stands or trailers	82
G300 Remove or replace engine plumbing	81
G256 Perform flex borescope inspections of engines	81
G271 Remove or replace accessory gearbox assemblies	81
G272 Remove or replace accessory gearbox assembly components	81
G302 Remove or replace engine reduction gearbox assembly components	81
G200 Inspect engine compressors	79
G227 Inspect turbine inlet temperate (TIT) systems	79
G199 Inspect engine combustion sections	79
H450 Remove or replace propeller brush blocks	77
G365 Service engine oil systems	77
G198 Inspect engine bleed valves and actuators	77
H432 Inspect propellers or related components	77
G203 Inspect engine exhaust section components	76
G172 Adjust engine system components	76
G201 Inspect engine controls	76
G220 Inspect QEC kits	74
G195 Inspect accessory gearboxes	73
G305 Remove or replace engine-to-aircraft throttle rigging system components	73
I492 Perform isochronal inspections of installed engines	71

TABLE 41

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651B AND DAFSC 2A671B AFRES PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651B (N=79)	2A671B (N=62)	DIFFERENCE
H450 Remove or replace propeller brush blocks	85	77	8
G303 Remove or replace engine tail pipes	85	82	3
G214 Inspect fuel filters	84	82	2
<hr/>			
B34 Direct in-shop maintenance	16	50	-34
C79 Inspect in-shop maintenance actions	23	55	-32
G271 remove or replace accessory gearbox assemblies	81	71	-10
G210 Inspect engine plumbing	81	87	-6
G300 Remove or replace engine plumbing	76	81	-5

TABLE 42

DISTRIBUTION OF AFSC 2A6X1A SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (ANG)

<u>JOB</u>	2A651A (N=774)	2A671A (N=427)	2A691 (N=54)
APPRENTICE F100 ENGINE MAINTENANCE JOB	12	0	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	17	3	0
CUT CREW CHIEF JOB	1	0	0
INSPECTION JOB	39	6	0
IN-SHOP CLUSTER	302	70	1
TEST CELL CLUSTER	20	11	0
GENERAL ENGINE MAINTENANCE CLUSTER	228	224	6
SECTION NCOIC JOB	1	0	0
JUNIOR TURBOPROP JOB	0	0	0
CAMS CLUSTER	24	13	0
MODULAR ENGINE REPAIR JOB	2	0	0
IN-SHOP PROPELLER JOB	0	0	0
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	6	2	0
FLIGHTLINE EXPEDITOR JOB	1	0	1
QUALITY ASSURANCE INSPECTOR JOB	0	24	0
SUPERVISORS CLUSTER	0	25	44
INSTRUCTOR JOB	1	0	0
MATERIAL SUPPORT JOB	3	3	0
ENGINE MANAGEMENT JOB	0	12	1
EQUIPMENT MANAGEMENT JOB	0	2	0
NOT GROUPED	117	32	1

Supervisory Cluster, which indicates a small number in supervisory positions, but the true shift to purely supervisory duties occurs at the 9-skill level. Thus, career ladder progression is atypical in this ANG AFSC.

Table 43 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. Five-skill level personnel have little to do with supervisory functions (duties A, B, and C), and 7-skill level members do not spend a great deal of time in these supervisory duties. As can be seen in Table 43, members of 5- and 7-skill level groups spend the largest amount of their time in duties G through R, with the exception of the "B" shred or turboprop duties H, J, and M. The bulk of 9-skill level members' time is spent performing supervisory functions, as mentioned above, and in duties E and F. Specific skill-level group discussions are presented below.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A651A. Thirty-three percent of this group's members are Senior Airmen/Sergeants, with another 55 percent holding the grade of Staff Sergeant. The biggest group of 5-skill level airmen (302) are performing in the In-Shop Cluster (see Table 42), and they indicate spending the majority of their time (6 percent) performing general aircraft engine maintenance tasks. Table 44 lists representative tasks for these incumbents. Examples of these tasks include; installing engines on transpiration stands or trailers, removing or replacing engine plumbing, and inspecting engine oil filters. Since the ANG has no 3-skill level authorizations, a 3-skill level to 5-skill level comparison is not possible.

DAFSC 2A671A. Members of this group have grades of Staff Sergeant (4 percent), Technical Sergeant (59 percent), and Master Sergeant (37 percent). Like their AFRES 7-skill level counterparts, the majority (76 percent) of this group's time is spent on technical tasks in duties G through R, while only 11 percent of their time is involved with supervisory functions (see Table 43). Representative tasks performed by 7-skill level personnel are listed in Table 45. Examples of technical tasks performed by AFRES 7-skill level personnel include: inspecting engine plumbing and engine exhaust section components, and inspecting engines before and after operation.

Tasks which best distinguish the difference between 5- and 7-skill level members are listed in Table 46. A higher percentage of 7-skill level members perform those typical supervisory tasks, reflecting the first-line supervisory role of these personnel. Examples of tasks with the greatest difference in members performing include: assigning maintenance and repair work, inspecting flightline maintenance actions and in-shop maintenance actions, and performing in-process inspections. However, as Table 43 indicates, a high percentage of 7-skill level personnel are performing technical tasks right along with 5-skill level ANG members. For this reason, ANG career ladder progression is atypical, as it was for their AFRES counterparts.

TABLE 43

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1A SKILL-LEVEL GROUPS (ANG)
(RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	DAFSC 2A651A (N=774)	DAFSC 2A671A (N=427)	DAFSC 2A691 (N=54)
A ORGANIZING AND PLANNING	1	4	18
B DIRECTING AND IMPLEMENTING	1	4	16
C INSPECTING AND EVALUATING	*	3	13
D TRAINING	1	3	7
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	3	5	11
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2	4	5
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	64	46	10
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	*	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	6	6	1
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	*	*	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	9	6	1
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*	*	*
M PERFORMING TEST CELL FUNCTIONS	3	3	1
N MAINTAINING AUXILIARY POWER UNITS (APUs) OR SMALL GAS TURBINE (SGT) ENGINES	1	2	*
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1	4	9
P MAINTAINING NINPOWERED ENGINE SUPPORT EQUIPMENT	3	3	1
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	1	1	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	3	5	6

* INDICATES LESS THAN 1 PERCENT

TABLE 44
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651A ANG PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=774)
G263 Place protective covers on engines	85
G210 Inspect engine plumbing	83
G236 Install engines on transportation stands or trailers	81
G360 Select and use hand tools	81
G300 Remove or replace engine plumbing	81
G207 Inspect engine oil filters	81
G206 Inspect engine magnetic chip detectors	77
G204 Inspect engine fan section components	76
G203 Inspect engine exhaust section components	76
G212 Inspect engine trailers or stands	76
G214 Inspect fuel filters	76
G359 Seal, plug or cap lines or openings	75
G238 Leak check operating engines	75
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	75
G213 Inspect engines before and after operation	74
G179 Blend engine fan blades	74
G188 Connect or disconnect test equipment to engines	74
G298 Remove or replace engine oil system components	74
G373 Transfer engines to transportation trailers	73
G266 Prepare engines for shipment	73
G296 Remove or replace engine magnetic chip detectors	72
G211 Inspect engine stator vanes	72
G271 Remove or replace accessory gearbox assemblies	72
G191 Drain fuel filters	69
G365 Service engine oil systems	69
G272 Remove or replace accessory gearbox assembly components	68

TABLE 45
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671A ANG PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=427)
G210 Inspect engine plumbing	85
G213 Inspect engines before and after operation	82
G203 Inspect engine exhaust section components	80
G236 Install engines on transportation stands or trailers	79
G207 Inspect engine oil filters	79
G263 Place protective covers on engines	78
G214 Inspect fuel filters	78
F159 Inspect areas for foreign object damage (FOD) items	77
G204 Inspect engine fan section components	77
G212 Inspect engine trailers or stands	76
G238 Leak check operating engines	75
G206 Inspect engine magnetic chip detectors	75
G360 Select and use hand tools	74
G200 Inspect engine compressors	74
G373 Transfer engines to transportation trailers	73
G229 Inspect turbine rotor blades	73
G373 Transfer engines to transportation trailers	73
G365 Service engine oil systems	72
G199 Inspect engine combustion sections	72
G211 Inspect engine stator vanes	72
G256 Perform flex borescope inspections of engines	72
G202 Inspect engine electrical components	72
G359 Seal, plug or cap lines or openings	71
G188 Connect or disconnect test equipment to engines	71
G300 Remove or replace engine plumbing	71
G201 Inspect engine controls	69

TABLE 46

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651A AND DAFSC 2A671A ANG PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651A (N=774)	2A671A (N=427)	DIFFERENCE
G300 Remove or replace engine plumbing	81	71	10
G214 Inspect engine oil filters	81	79	2
G236 Install engines on transportation stands or trailers	81	79	2
G206 Inspect engine magnetic chip detectors	77	75	2
G212 Inspect engine trailers or stands	76	76	0
<hr/>			
A1 Assign maintenance and repair work	20	60	-40
C78 Inspect flightline maintenance actions	10	48	-38
C79 Inspect in-shop maintenance actions	14	52	-38
G258 Perform in-process inspections	26	63	-37
A8 Determine work priorities	16	51	-35

DAFSC 2A691. Of the 54 ANG 9-skill level members in the sample survey, 17 percent are Master Sergeants, while 81 percent are Senior Master Sergeants. Table 42 indicates 44 of the 9-skill level personnel are in the Supervisor Cluster. As shown in Table 45, a high percentage of ANG 9-skill level personnel are performing mainly supervisory tasks.

As Table 43 shows, members of the ANG DAFSC 2A691 group are clearly the supervisors of the career ladder. Forty-seven percent of their job time is spent performing tasks in duties A, B, and C, plus another 11 percent in general administrative or supply functions. Although 9-skill level personnel are performing some technical tasks, the percent members performing are somewhat lower than 7-skill level members (see Table 47). Also as shown in Table 48, higher percentages of 7-skill level members are performing technical tasks versus supervisory task performance.

AFSC 2A6X1B

As expected, ANG 2A6X1B skill-level groups are concentrated in turboprop/turboshaft jobs. Of the 265 5- and 120 7-skill level members in this group, the majority (92 percent of 5- and 87 percent of 7-skill level members) indicate they are maintaining the T56-A-7/15/21 engine found on C-130 aircraft. ANG DAFSC 2A651B and 2A671B personnel are performing jobs in mainly the General Engine Maintenance Cluster and In-Shop Propeller Job, with 11 7-skill level personnel in the Supervisors Cluster (see Table 49). As is the case with their "A" shred counterparts, DAFSC 2A671B personnel are spending a higher amount of time performing in technical duties than they are in supervisory functions. Because of this, career ladder progression is atypical in this AFSC, also. Discussed below are specific skill-level descriptions.

Descriptions and Comparisons of Skill-Level Groups

DAFSC 2A651B. Fifty-five percent of ANG 2A651B members hold the grade of Technical Sergeant, while another 31 percent are Staff Sergeants and they average performing 267 tasks. They spend the majority of their time in duties G through L, as indicated in Table 50. As mentioned above, 92 percent indicate they are maintaining the engine in the C-130 aircraft, while the other 6 percent are maintaining the engine in the HH-60G helicopter. Again, as stated before, an absence of 3-skill level authorizations in ANG prevents a comparison of 3- to 5-skill level groups. Table 51 shows examples of tasks being performed by 5-skill level ANG members.

DAFSC 2A671B. Of the 120 7-skill level personnel in the survey sample, only 11 are performing in the Supervisor Cluster (see Table 49). Members of the ANG 2A671B group indicate they spend only 11 percent of their time performing in supervisory duties A, B, and C, as shown in Table 50. The majority of the remainder of time spent by personnel in this group is on technical task performance in duties G through R. This is again an indication that career ladder

TABLE 47
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A691 ANG PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=54)
A8 Determine work priorities	98
A1 Assign maintenance and repair work	98
B31 Counsel personnel on personal or military-related matters	96
A20 Plan or schedule work assignments	93
A24 Schedule leaves	93
B42 Implement self-inspection programs	93
A6 Determine logistics requirements, such as space, personnel, or equipment	93
B28 Adjust daily maintenance plans to meet operational commitments	91
A5 Coordinate work on engine components with appropriate agencies	91
A20 Plan or schedule work assignments	91
C83 Write civilian performance appraisals	91
C71 Evaluate personnel for promotion, demotion, or reclassification	91
A2 Assign personnel to duty positions	89
A17 Establish performance standards for subordinates	89
C70 Evaluate personnel for compliance with performance standards or TOs	89
B47 Interpret policies, directives, or procedures for subordinates	89
A26 Schedule personnel for temporary duty (TDY) assignments	89
C67 Evaluate inspection report findings	87
B34 Direct in-shop maintenance activities	83
C75 Evaluate work schedules	81
C61 Analyze workload requirements	81
E116 Annotate civilian attendance sheets	80
B54 Supervise Aerospace Propulsion Craftsman, Jet Engines (AFSC 2A67A)	76
B34 Direct in-shop maintenance activities	72
B33 Direct flightline maintenance activities	70

TABLE 48

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A671A AND DAFSC 2A691 ANG PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A671A (N=427)	2A691 (N=54)	DIFFERENCE
G300 Remove or replace engine plumbing	72	13	59
G298 Remove or replace engine oil system components	70	11	59
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	70	15	55
G314 Remove or replace ignition system components	66	11	55
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	62	9	53
<hr/>			
A26 Schedule personnel for temporary duty (TDY) assignments	11	89	-78
A24 Schedule leaves	17	93	-76
C85 Write recommendations for awards and decorations	19	89	-70
A17 Establish performance standards for subordinates	20	89	-69
B28 Adjust daily maintenance plans to meet operational commitments	25	91	-66

TABLE 49
DISTRIBUTION OF AFSC 2A6X1B SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (ANG)

<u>JOB</u>	2A651B (N=265)	2A671B (N=120)
APPRENTICE F100 ENGINE MAINTENANCE JOB	1	0
FLIGHTLINE ENGINE MAINTENANCE CLUSTER	0	0
CUT CREW CHIEF JOB	0	0
INSPECTION JOB	3	0
IN-SHOP CLUSTER	4	0
TEST CELL CLUSTER	0	0
GENERAL ENGINE MAINTENANCE CLUSTER	140	68
SECTION NCOIC JOB	0	1
JUNIOR TURBOPROP JOB	8	0
CAMS CLUSTER	8	3
MODULAR ENGINE REPAIR JOB	0	0
IN-SHOP PROPELLER JOB	37	16
NONPOWERED ESE/APU/SGT REPAIR CLUSTER	2	1
FLIGHTLINE EXPEDITOR JOB	0	0
QUALITY ASSURANCE INSPECTOR JOB	0	7
SUPERVISORS CLUSTER	0	11
INSTRUCTOR JOB	1	0
MATERIAL SUPPORT JOB	0	0
ENGINE MANAGEMENT JOB	0	0
EQUIPMENT MANAGEMENT JOB	0	0
NOT GROUPED	61	13

TABLE 50

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A6X1B SKILL-LEVEL GROUPS (ANG)
(RELATIVE PERCENT OF JOB TIME)

<u>DUTIES</u>	DAFSC 2A651B (N=265)	DAFSC 2A671B (N=120)
A ORGANIZING AND PLANNING	1	4
B DIRECTING AND IMPLEMENTING	1	4
C INSPECTING AND EVALUATING	*	3
D TRAINING	1	3
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	2	5
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2	4
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	48	34
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	10	9
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	5	5
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	3	3
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	6	5
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	8	5
M PERFORMING TEST CELL FUNCTIONS	2	2
N MAINTAINING AUXILIARY POWER UNITS(APUs) OR SMALL GAS TURBINE (SGT) ENGINES	2	3
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1	3
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	2	2
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	1	1
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	4	5

* INDICATES LESS THAN 1 PERCENT

TABLE 51
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A651B ANG PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=265)
G303 Remove or replace engine tail pipes	82
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	80
G365 Service engine oil systems	79
G207 Inspect engine oil filters	77
G214 Inspect fuel filters	76
G210 Inspect engine plumbing	75
G236 Install engines on transportation stands or trailers	74
G188 Connect or disconnect test equipment to engines	74
G185 Clean engines	73
G298 Remove or replace engine oil system components	73
G191 Drain fuel filters	73
G199 Inspect engine combustion sections	72
G206 Inspect engine magnetic chip detectors	71
G203 Inspect engine exhaust section components	71
G291 Remove or replace engine fuel manifolds or nozzles	70
G200 Inspect engine compressors	70
G213 Inspect engines before and after operation	69
G189 Drain and flush engine oil systems	69
I495 Position maintenance stands for engine removals or installations	69
G212 Inspect engine trailers or stands	68
G300 Remove or replace engine plumbing	68
G201 Inspect engine controls	68
I490 Perform home station checks of installed engines	67
G172 Adjust engine system components	66

progression is also atypical in the 2A6X1B AFSC. Sixty-six percent of the members of this group are Technical Sergeants, with another 44 holding the grade of Master Sergeant. Table 52 lists examples of tasks performed by DAFSC 2A671B personnel.

Technical task performance is slightly higher for 5-skill level members than that of their 7-skill level coworkers, as shown in Table 53. A higher percentage of 7-skill level members indicate performing tasks, such as directing in-shop maintenance activities, inspecting in-shop maintenance actions, and other supervisory tasks, than 5-skill level personnel; but the core of their job remains technical in nature.

As can be seen from the data presented above, in the AFRES and ANG DAFSC analysis, career ladder progression is not typical as compared to their Active Duty counterparts. Further analysis reveals a possible explanation for this. The majority of AFRES and ANG 7-skill level respondents in the survey indicate they are either AFRES or ANG full-time technicians and not traditional AFRES or ANG members. For example, 70 percent of the 427 AFRES DAFSC 2A671A members responded to the background question concerning component status, as being AFRES Technicians or full-time employees. These full-time technicians are responsible for maintaining their engines and aircraft on a day-to-day basis and have little time for supervisory functions.

AFMAN 36-2108 SPECIALTY DESCRIPTIONS ANALYSIS

Survey data were compared to the AFMAN 36-2108 *Specialty Descriptions* for AFSC 2A6X1A/B, Aerospace Propulsion, dated 31 October 1995. The descriptions for the skill levels of both the "A" and "B" shreds were accurate, depicting the technical aspects of the job, as well as the supervisory responsibilities previously described in the DAFSC analysis. Also, the *Specialty Descriptions* for AFSC 2A691, Superintendent were compared to survey data and accurately reflect the management responsibilities previously described. The descriptions also capture the primary responsibilities of the above AFSCs and Superintendent members in the applicable clusters and jobs identified by the job structure analysis process.

TRAINING ANALYSIS

Occupational survey data are sources of information which can be used to assist in the development of relevant training programs for entry-level personnel. Factors used to evaluate entry-level Aerospace Propulsion training include jobs being performed by first-enlistment personnel, overall distribution of first-enlistment personnel across career ladder jobs, percent

TABLE 52
REPRESENTATIVE TASKS PERFORMED BY AFSC 2A671B ANG PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=120)
F159 Inspect areas for foreign object damage (FOD) items	83
G210 Inspect engine plumbing	75
G203 Inspect engine exhaust section components	75
G199 Inspect engine combustion sections	74
G200 Inspect engine compressors	73
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	73
G206 Inspect engine magnetic chip detectors	73
G207 Inspect engine oil filters	73
R846 Access core automated maintenance system (CAMS) menus and data screens	72
G198 Inspect engine bleed valves and actuators	71
E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits	70
G201 Inspect engine controls	70
G303 Remove or replace engine tail pipes	69
G214 Inspect fuel filters	69
G185 Clean engines	68
I490 Perform home station checks of installed engines	68
G365 Service engine oil systems	68
G220 Inspect QEC kits	68
C079 Inspect in-shop maintenance actions	67
D093 Conduct OJT	67
G172 Adjust engine system components	66
A1 Assign maintenance and repair work	65
G191 Drain fuel filters	65
E124 Inventory equipment or supplies	65

TABLE 53

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2A651B AND DAFSC 2A671B ANG PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	2A651B (N=79)	2A671B (N=62)	DIFFERENCE
G312 Remove or replace gearbox assemblies	75	60	15
G365 Service engine oil systems	79	68	11
G303 Clean engine parts using cleaners, other than ultrasonic cleaners	80	73	7
G207 Inspect engine oil filters	77	73	5
G210 Inspect engine plumbing	75	73	2
<hr/>			
B34 Direct in-shop maintenance activities	16	50	-34
C79 Inspect in-shop maintenance actions	23	55	-32
D106 Evaluate progress of trainees	15	40	-25
C80 Inspect personnel for compliance with military standards	13	37	-24
A1 Inspect flightline maintenance actions	18	42	-24

first-job (1-24 month TAFMS) and first-enlistment (1-48 months TAFMS) members spend performing specific tasks or using specific equipment items, ratings of how much TE tasks should receive in formal training, and ratings of relative TD.

First-Enlistment Personnel

AFSC 2A6X1A

In this study, there are 743 2A6X1A, 547 2A631C, 127 2A631D, and 90 2A631E (total of 1,507) members in their first enlistment (1-48 TAFMS), representing 22 percent of the survey sample. Table 54 shows the relative percent of time spent across duties by first-enlistment 2A6X1A members. The majority (59 percent) of their time is being spent performing tasks related to general aircraft maintenance functions, while 8 percent is spent on in-shop maintenance on aircraft engines. Examples of tasks performed by members in this group are listed in Table 55. AFSC 2A631C first-enlistment personnel also indicate spending the majority of their job time (63 percent) on tasks pertaining to general aircraft engine functions (see Table 56). Table 57 shows examples of tasks performed by this first-enlistment group. AFSC 2A631D first-enlistment members, as shown in Table 58, indicate they also spend a large amount of time (67 percent) on tasks in the general aircraft engine maintenance duty. However, as Table 59 shows, the majority of members of this group are performing tasks related to the F100 engine. Examples of tasks peculiar to this engine are remove or replace FTIT system components and rig RCVV actuators. AFSC 2A631E first-enlistment personnel also spend the majority of their time (63 percent) on tasks pertaining to general aircraft engine maintenance and an additional 10 percent on in-shop maintenance on aircraft engines (see Table 60). Examples of tasks performed by 2A631E members are listed in Table 61.

AFSC 2A6X1B

The 362 members in the 1-48 months TAFMS for AFSC 2A6X1B, Aerospace Propulsion, Turboprop/Turboshaft, represent 30 percent of all surveyed AFSC 2A6X1B personnel. Table 62 shows these first-enlistment personnel spend approximately 47 percent of their time performing tasks related to general aircraft engine maintenance functions, and an additional 24 percent in duties H, J, and L, which as expected, pertain to maintenance of propellers. Representative tasks performed by first-enlistment AFSC 2A6X1B personnel are displayed in Table 63. Examples of these tasks are removing or replacing engine tail pipes, propeller brush blocks, and front spinner cones (noses).

TABLE 54

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2A6X1A PERSONNEL

<u>DUTIES</u>	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	2
C INSPECTING AND EVALUATING	1
D TRAINING	1
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	4
F PERFORMING QUALITY ASSURANCE FUNCTIONS	3
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	59
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	5
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	8
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*
M PERFORMING TEST CELL FUNCTIONS	2
N MAINTAINING AUXILIARY POWER UNITS (APUs), OR SMALL GAS TURBINE (SGT) ENGINES	2
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	2
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	2
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	3

* Denotes less than 1 percent

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 55
REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 2A6X1A PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=743)
G210 Inspect engine plumbing	80
G207 Inspect engine oil filters	78
G263 Place protective covers on engines	77
G360 Select and use hand tools	76
G300 Remove or replace engine plumbing	75
G203 Inspect engine exhaust section components	75
G236 Install engines on transportation stands or trailers	73
G204 Inspect engine fan section components	73
G214 Inspect fuel filters	72
G213 Inspect engines before and after operation	71
G179 Blend engine fan blades	71
G298 Remove or replace engine oil system components	69
G212 Inspect engine trailers or stands	69
G206 Inspect engine magnetic chip detectors	69

TABLE 56

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2A631C PERSONNEL

<u>DUTIES</u>	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	*
D TRAINING	*
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	4
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	63
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	5
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	0
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	7
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*
M PERFORMING TEST CELL FUNCTIONS	1
N MAINTAINING AUXILIARY POWER UNITS (APUs), OR SMALL GAS TURBINE (SGT) ENGINES	4
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	3
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	4
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	3

* Denotes less than 1 percent

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 57
REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 2A631C PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=547)
G360 Select and use hand tools	66
G263 Place protective covers on engines	65
G179 Blend engine fan blades	63
G359 Seal, plug, or cap lines or openings	62
B210 Inspect engine plumbing	62
G214 Inspect fuel filters	61
G207 Inspect engine oil filters	61
G300 Remove or replace engine plumbing	59
G298 Remove or replace engine oil system components	59
G191 Drain fuel filters	59
G281 Remove or replace engine anti-icing system components	55
G206 Inspect engine magnetic chip detectors	53
G236 Install engines on transportation stands or trailers	52
G203 Inspect engine exhaust section components	50
G204 Inspect engine fan section components	50

TABLE 58

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2A631D PERSONNEL

<u>DUTIES</u>	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	1
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	*
D TRAINING	*
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	6
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	67
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	0
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	1
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	0
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	11
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	0
M PERFORMING TEST CELL FUNCTIONS	2
N MAINTAINING AUXILIARY POWER UNITS (APUs), OR SMALL GAS TURBINE (SGT) ENGINES	1
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	3
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	*
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	4

* Denotes less than 1 percent

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 59
REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 2A631D PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=127)
G263 Place protective covers on engines	73
G360 select and use hand tools	72
G206 Inspect engine magnetic chip detectors	71
G359 Seal, plug, or cap lines or openings	71
G373 Transfer engines to transportation trailers	67
G273 Remove or replace afterburner or augmentor system components	66
G300 Remove or replace engine plumbing	66
G296 Remove or replace engine magnetic chip detectors	66
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	65
G210 Inspect engine plumbing	63
G347 Rig afterburner of augmentor systems	62
G281 Remove or replace engine anti-icing system components	62
G294 Remove or replace engine gearbox modules	62
G353 Rig RCVV actuators	61
G320 Remove or replace oil cooler assemblies	61

TABLE 60

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2A631E PERSONNEL

<u>DUTIES</u>	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	*
D TRAINING	*
E PERFORMING GENERAL ADMINISTRATIVE OR SUPPLY FUNCTIONS	6
F PERFORMING QUALITY ASSURANCE FUNCTIONS	3
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	63
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	2
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	*
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	10
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	*
M PERFORMING TEST CELL FUNCTIONS	1
N MAINTAINING AUXILIARY POWER UNITS (APUs), OR SMALL GAS TURBINE (SGT) ENGINES	*
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	*
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	4
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	1
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	5

* Denotes less than 1 percent

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 61
REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 2A631E PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=90)
G263 Place protective covers on engines	79
G360 Select and use hand tools	72
G359 Seal, plug, or cap lines or openings	68
G236 Install engines on transportation stands or trailers	67
G266 Prepare engines for shipment	64
G210 Inspect engine plumbing	63
G191 Drain fuel filters	63
G300 Remove or replace engine plumbing	61
G373 Transfer engines to transportation trailers	60
G207 Inspect engine oil filters	60
F159 Inspect areas for foreign object damage (FOD) items	58
G203 Inspect engine exhaust section components	57
G179 Blend engine fan blades	54
G289 Remove or replace engine exhaust section components	52
G282 Remove or replace engine bearings	52

TABLE 62

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2A631B PERSONNEL

<u>DUTIES</u>	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	1
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	1
D TRAINING	1
E PERFORMING LABORATORY ADMINISTRATIVE OR SUPPLY FUNCTIONS	3
F PERFORMING QUALITY ASSURANCE FUNCTIONS	2
G PERFORMING GENERAL AIRCRAFT ENGINE MAINTENANCE FUNCTIONS	47
H PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	14
I PERFORMING FLIGHTLINE MAINTENANCE ON AIRCRAFT ENGINES	5
J PERFORMING FLIGHTLINE MAINTENANCE ON PROPELLERS	3
K PERFORMING IN-SHOP MAINTENANCE ON AIRCRAFT ENGINES	4
L PERFORMING IN-SHOP MAINTENANCE ON PROPELLERS	7
M PERFORMING TEST CELL FUNCTIONS	1
N MAINTAINING AUXILIARY POWER UNITS (APUs), OR SMALL GAS TURBINE (SGT) ENGINES	2
O PERFORMING ENGINE MANAGEMENT FUNCTIONS	1
P MAINTAINING NONPOWERED ENGINE SUPPORT EQUIPMENT	1
Q PERFORMING CROSS UTILIZATION TRAINING (CUT) TASKS	2
R PERFORMING CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)/CAMS FOR AIRLIFTERS FUNCTIONS	4

* Denotes less than 1 percent

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 63
REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 2A631B PERSONNEL

<u>TASKS</u>	PERCENT MEMBERS PERFORMING (N=362)
G207 Inspect engine oil filters	73
G214 Inspect fuel filters	72
G303 Remove or replace engine tail pipes	71
G360 Select and use hand tools	70
G365 Service engine oil systems	70
H450 Remove or replace propeller brush blocks	70
G360 Select and use hand tools	70
G299 Remove or replace engine oil system components	69
G236 Install engines on transportation stands or trailers	69
G188 Connect or disconnect test equipment to engines	68
H444 Remove or replace front spinner cones (noses)	68
G187 Connect or disconnect external aircraft power	67
G191 Drain fuel filters	65
G210 Inspect engine plumbing	64
G185 Clean engines	63

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide training personnel with a rank-ordering of those tasks considered important for airmen with 1-48 months TAFMS training (TE) and a measure of the relative difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for new personnel. These decisions must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and the percentage of first-enlistment personnel performing tasks to produce Automated Training Indicators (ATI). ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, AETCR 52-22. ATIs allow training developers to quickly focus attention on those tasks which are most likely to qualify for resident course consideration.

AFSC 2A6X1A

As previously stated, TE data is not available for AFSC 2A6X1A, due to a lack of acceptable interrater reliability among "A" shred 7-skill levels who responded to TE booklets.

Table 64 lists the tasks having the highest TD ratings, and the percentages of 1-24 months and 1-48 months TAFMS, 5-, and 7-skill level personnel performing. Three of the four tasks with the highest TD ratings involve troubleshooting. Although TE ratings are not available, training personnel may want to consider tasks of this nature for the 7-skill level course as they rate high in learning difficulty and are performed by moderate numbers of 5- and 7-skill level personnel; also, troubleshooting tasks are not normally included in 3-skill level resident course training.

AFSC 2A6X1B

Examples of tasks having the highest TE ratings for AFSC 2A6X1B personnel are listed in Table 65. Included for each task are the percentage of first-job and first-enlistment personnel and the TD rating. The majority of tasks listed deal with propeller maintenance. The remaining tasks are those performed by "B" shred personnel on the T56 engine found on the C-130 aircraft.

TABLE 64
AFSC 2A6X1A TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

<u>TASKS</u>	TSK DIF	PERCENT MEMBERS PERFORMING			
		1-24 MOS	1-48 MOS	5- LVL	7- LVL
G405 Troubleshoot flameout's	7.25	25	28	28	28
G400 Troubleshoot engine stalls	7.12	34	37	38	38
M686 Operationally check engines installed on test cells	7.10	24	20	15	17
G383 Troubleshoot electrical or electronic malfunctions	7.02	24	22	24	27
K584 Remove or replace engine compressors	6.96	30	30	21	16
I502 Run installed engines	6.77	28	28	30	31
K583 Remove or replace compressor modules	6.72	27	26	18	12
I503 Trim installed engines	6.70	25	27	29	28
G341 Remove or replace turbine rotors	6.68	28	29	21	19
G237 Interpret engine wiring or schematic diagrams	6.61	35	39	40	41
G256 Perform flex borescope inspections of engines	6.48	54	57	56	49
G312 Remove or replace gearbox assemblies	6.40	56	52	39	27
G282 Remove or replace engine bearings	6.40	50	47	37	27
G294 Remove or replace engine gearbox modules	6.28	50	43	32	19
G351 Rig engine throttle control systems	6.27	50	50	50	39
I499 Remove or replace engines in aircraft	6.27	52	47	42	38

TD MEAN = 5.00; S.D. = 1.00

TABLE 65

EXAMPLES OF AFSC 2A631B TASKS WITH HIGHEST
TRAINING EMPHASIS RATINGS

TRG EMP	PERCENT MEMBERS PERFORMING	1-24 MOS		1-48 MOS		TASK DIF
		1-24 MOS	1-48 MOS	1-24 MOS	1-48 MOS	
J520	Remove or replace propellers on aircraft	5.98	47	52	6.19	
J521	Service propeller systems	5.77	49	54	4.87	
H423	Adjust propeller blade angles	5.40	59	58	5.21	
H458	Remove or replace valve housings	5.40	61	60	6.01	
H472	Troubleshoot propeller synchrophaser systems	5.35	31	38	6.92	
G351	Rig engine throttle control systems	5.20	55	62	6.27	
H425	Adjust reverse torque	5.15	40	44	4.29	
G350	Rig engine control linkages	5.11	56	64	6.23	
H463	Rig valve housings	5.09	49	52	6.06	
G411	Troubleshoot temperature datum systems	5.05	42	49	6.73	
H471	Troubleshoot propeller NTS systems	5.04	34	40	5.27	
H447	Remove or replace pitch lock regulators	5.04	60	61	5.43	
I499	Remove or replace engines in aircraft	4.98	43	47	6.27	
G397	Troubleshoot engine oil systems	4.93	39	51	5.97	
H421	Adjust mechanical RPMs	4.92	38	42	4.15	
H462	Rig mechanical linkages from propeller governor to coordinators	4.87	42	49	5.89	
G256	Perform flex borescope inspections of engines	4.84	45	54	6.48	
H450	Remove or replace propeller brush blocks	4.84	73	70	4.13	
G401	Troubleshoot engine starter systems	4.82	40	50	5.32	
G172	Adjust engine system components	4.79	53	62	5.16	
H418	Adjust beta schedules on Hamilton Standard turbopropellers	4.79	37	37	5.58	

These tasks are performed by average to high percentages of first-job and first-enlistment personnel. Those tasks listed in Table 65 represent only a portion of AFSC 4T0X2 tasks with high TE ratings (above 3.29).

Table 66 lists examples of tasks having the highest TD ratings. The percentages of 2A6X1B first-job, first-enlistment, 5- and 7-skill level personnel performing, and TE ratings are also included for each task. Most of the tasks listed with high TD ratings (6.00 or above) deal with tasks that were also rated high in TE. Examples of tasks with high TD ratings pertain to troubleshooting. As noted above for "A" shred personnel, training personnel may want to consider tasks of this nature for the 7-skill level course. As with Table 65 above, those tasks listed in Table 66 are only a portion of those tasks with high TD ratings.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

Support/Test Equipment

Examples of support equipment and test equipment used or operated by 40 percent or more of the first-enlistment personnel in career ladder 2A6X1A are listed in Table 67. Engine removal/installation, and transportation equipment, along with maintenance platforms/stands, top the list. Borescope kits and measuring devices are also commonly used or operated by members of first-enlistment groups.

Table 68 lists support equipment or test equipment used by AFSC 2A6X1B first-enlistment personnel. They use most of the same pieces of support or test equipment as do their "A" shred counterparts, with the exception of those items peculiar to "B" shred aircraft. Examples include electronic temperature datum control test sets, and thermocouple resistance testers.

Specialty Training Standard (STS) Analysis

A comprehensive review of STSs 2A6X1A and 2A6X1B was made by comparing survey data to STS elements. Technical school personnel from the 361st Training Squadron, Sheppard AFB TX matched JI tasks to appropriate STS sections and subsections. A complete computer listing displaying the percent members performing tasks, TE and TD ratings for each task, where applicable, along with the STS matching, has been forwarded to the technical school for their further review of training documents. STS elements with performance objectives were reviewed for TE, TD, and percent members performing information, as stipulated in AETCI 36-2601, dated 5 July 1996. STS paragraphs containing general knowledge information, subject-matter knowledge requirements, or supervisory responsibilities were not reviewed. Typically, STS elements matched to tasks which have sufficiently high TE and TD ratings and are performed by at least 20 percent of personnel in appropriate experience of skill-level groups (such as first-

TABLE 66

AFSC 2A631B TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS	PERCENT MEMBERS PERFORMING			TRG EMP	
	1-24 MOS	1-48 MOS	5- LVL	7- LVL	
L621	7.33	16	18	22	21
G405	7.25	28	37	46	49
G400	7.12	24	34	42	44
G383	7.02	24	31	39	43
H472	6.92	31	38	46	51
I502	6.77	22	30	44	42
G411	6.78	42	49	54	54
G341	6.68	20	25	30	32
G237	6.61	28	39	52	51
H433	6.60	26	31	41	45
H434	6.58	33	38	49	44
G256	6.48	45	54	63	58
I485	6.48	29	39	52	50
G391	6.46	40	49	57	55
I504	6.44	22	27	33	37
I506	6.41	26	35	45	46
G312	6.40	38	45	48	41

TD MEAN = 5.00; S.D. = 1.00
 TE MEAN = 1.91; S.D. = 1.38 (HIGH = 3.29)

TABLE 67

SUPPORT EQUIPMENT OR TEST EQUIPMENT USED OR OPERATED BY 40
PERCENT OR MORE OF 2A6X1A FIRST-ENLISTMENT PERSONNEL

SUPPORT OR TEST EQUIPMENT

PERCENT MEMBERS
PERFORMING
1ST ENL
(N=743)

Engine Removal/Installation, and Transportation Equipment	77
Maintenance Platforms/Stands	70
Kits, Flex Borescope	70
Gauges, Thickness	63
Gauges, Depth	62
Kits, Rigid Borescope	62
Outside/Inside Micrometers	60
Micrometer Calipers	59
Hoist, Powered Overhead	58
Computers	55
Kits, Throttle Rig	52
Wrenches, Torque	55
Micrometer Vernier Scales	50
Carts, Oil servicing	49
Volt-OHM-Multimeters (VOMs)	48
Calculators	47
Bobtails	47
Forklifts	42
Tugs	43
Bearing Heaters	43

TABLE 68

SUPPORT EQUIPMENT OR TEST EQUIPMENT USED OR OPERATED BY 40
PERCENT OR MORE OF 2A6X1B FIRST-ENLISTMENT PERSONNEL

<u>SUPPORT OR TEST EQUIPMENT</u>	PERCENT MEMBERS PERFORMING 1ST ENL (N=342)
Wrenches, Torque	80
Engine Removal/Installation, and Transportation Equipment	75
Maintenance Platforms/Stands	73
Wrenches, Sweeny	61
Kits, Flex Borescope	60
Outside/Inside Micrometers	60
Forklifts	59
Test Sets, Electronic Temperature Datum Control	57
Gauges, Thickness	55
Gauges, Depth	54
Volt-OHM-Multimeters (VOMs)	54
Tensiometers	51
Computers	49
Calculators	49
Micrometer Calipers	47
Tugs	47
Testers. Thermocouple Resistance	46
Hoist, Powered Overhead	43
Hoist, A-Frame	42

enlistment (1-48) months total active federal military service, and 5- and 7-skill level groups should be considered for inclusion in the STS. Likewise, elements matched to tasks with less than 20 percent performing in all of these groups should be considered for deletion from the STS.

AFSC 2A6X1A

STS paragraphs containing performance information were reviewed. Of the 75 performance-coded elements in the STS, all were found to be supported by occupational survey data.

Plan of Instruction (POI) Analysis

JI tasks were matched to related training objectives in the four POIs for the "A" shred entry level courses with assistance from the 361st Training Squadron SMEs. The method employed was similar to that of the STS percent members performing data for first-job (1-24 months TAFMS) personnel, first-enlistment (1-48 months TAFMS) personnel, and TE and TD ratings.

POI blocks, units of instruction, and learning objectives were compared to the standard set forth in AETCR 52-22, dated 17 February 1989 (30 percent or more of the first-enlistment group performing tasks trained, along with sufficiently high TE and TD ratings on those tasks). By this guidance, tasks trained in the course which do not meet these criteria should be considered for elimination from the formal course, if not justified on some other acceptable basis.

The results of the review of those four POIs follows:

J3AQR2A631-001, Aerospace Propulsion Fundamentals, Jet Engine, dated 30 November 1995. Only two of the nine performance-coded learning objectives in this course are not supported by survey data. POI items I 2g and I 3c should be reviewed by training personnel for possible deletion from this course.

J3ABR2A631C-001, Aerospace Propulsion Apprentice, Jet Engine (Conventional), dated November 1995. Seven of the 39 proficiency-coded learning objectives listed in the conventional engine course are not supported by survey data. Table 69 lists these performance-coded objectives. Objectives II 5a, II 5b, and II 5c all relate to thrust reverser maintenance, while objectives III 5e and III 5h pertain to fan section maintenance. Along with objective II 4c, these learning objectives should also be reviewed by training personnel to see if they should remain in this POI.

J3ABR2A631D-007, Aerospace Propulsion Apprentice, Jet Engine (F100), dated 30 November 1995. Of the 85 proficiency-coded learning objectives listed in this F100 engine entry level course, only 7 are not supported by survey data. As shown in Table 70, learning

TABLE 69

**J3ABR2A631C-001 COURSE OBJECTIVES
WITH 30 PERCENT OR LESS MEMBERS PERFORMING**

POI/REFERENCE/TASKS	1ST High (G3367)	1ST High (G3367)	1ST High (G3367)	1ST High (G3367)
II 4c Given an engine trainer, technical order, and a CTIK, use two safety devices when installing engine accessories with no more than two errors	13	12	4.04	
G327 Remove or replace safety devices on engine components				
II 5a Given an engine trainer, technical orders, support equipment, and working as a team member, remove five thrust reverser components with no more than two errors per component	25	24	5.07	
G335 Remove or replace thrust reverser assembly components				
II 5b Given an engine trainer, technical orders, support equipment, and working as a team member, inspect five thrust reverser components with no more than two errors per component	25	24	4.86	
G224 Inspect thrust reverser system components				
II 5c Given an engine trainer, technical orders, support equipment, and working as a team member, install five thrust reverser components with no more than two errors per component	25	24	5.07	
G335 Remove or replace thrust reverser assembly components				
III 5b Given an engine trainer, portable hoisting equipment, and working as a team member, disassembling the engine, operate the portable hoist with no more than two errors	28	28	5.98	
G310 Remove or replace fan modules, fan sections, or fan components				
III 5e Given an engine trainer, technical order, support equipment, and working as a team member, remove the fan section with no more than four errors	28	28	5.98	
G310 Remove or replace fan modules, fan sections, or fan components				
III5h Given an engine trainer, technical order, support equipment, and working as a team member, install the fan section with no more than four errors	28	28	5.98	
G310 Remove or replace fan modules, fan sections, or fan components				

TABLE 70

J3ABR2A631D-007 COURSE OBJECTIVES
WITH 30 PERCENT OR LESS MEMBERS PERFORMING

POI REFERENCE/TASKS	1ST JOB (N=63)		1ST LINE (N=127)		TK DUTY	
	1ST JOB (N=63)	1ST LINE (N=127)	1ST JOB (N=63)	1ST LINE (N=127)	TK DUTY	TK DUTY
I 8c Given an engine trainer, technical order, and safety devices, use the safety devices with no more than three errors			3	8	4	4.04
G327 Remove or replace safety devices on engine components						
I 9c Given a maintenance stand, and applicable technical orders, and working as a team member, operate the stand with no more than two errors			12	12	3	3.73
P797 Operationally check engine installation/removal trailers						
III 1t Given an engine trainer, technical orders, support equipment, and working as a team member, inspect two fuel nozzles with no more than two errors			18	28	4	4.90
K549 Inspect engine fuel nozzles						
III 1x Given an engine trainer, CTK, applicable technical orders, and engine hardware, correctly use safety devices to lockwire two fuel nozzles						
G327 Remove or replace safety devices on engine components			3	8	4	4.04
IV 4b Given transportation equipment, technical orders, and working as a team member, operate the equipment during engine removal with no more than two errors			12	12	3	3.73
P797 Operationally check engine installation/removal trailers						
IV 4c Given an aircraft trainer, technical orders, support equipment, and working as a team member, remove the engine from the airframe, with no more than two errors			3	6	6	6.27
I499 Remove or replace engines in aircraft						
IV 4d Given an aircraft trainer, technical orders, support equipment, and working as a team member, install the engine from the airframe, with no more than two errors			3	6	6	6.27
I499 Remove or replace engines in aircraft						

objectives IV 4c and IV 4d relate to removing and replacing engines from the aircraft. These two objectives, along with the other objectives listed in Table 70, should be reviewed by training personnel for possible deletion from the course.

J3ABR2A631E-006, Aerospace Propulsion Apprentice, Jet Engine (F110), dated 30 November 1995. Examples of the 11 proficiency-coded items not supported by survey data for the F110 course are shown in Table 71. Objectives IV 1b, IV 1c, and IV 2b all pertain to LPT maintenance and should be discussed at the next Utilization and Training Workshop by training and AFSC management personnel to see if these and the other identified objectives should remain in the course. Those objectives are I 7g, I 10a, V 1a, V 11, V 3a, V 3b, and V 5g,

AFSC 2A6X1B

Specialty Training Standard

A similar comparison of tasks matched to performance elements was made to the AFSC 2A6X1B STS, dated July 1995. This STS is also very well supported by survey data. Of the 75 performance-coded elements, only one was unsupported; element 13c(14), Inlet Guide Vane Actuator. As this element is helicopter unique, only 4 percent of the first-job and first-enlistment "B" shred groups perform the task matched to this item. Training personnel and SMEs should review this element to determine if they warrant remaining in the STS.

Table 72 lists examples of tasks not referenced to STS 2A6X1B. Some of these tasks are rated high in TE and TD and have high percent members performing. Training personnel and SMEs should review the tasks not referenced listing for possible inclusion in the STS

Plan of Instruction

POI J3ABR2A631B-001, Aerospace Propulsion Apprentice, Turboprop/Turboshaft Engine, dated 13 February is also well supported by survey data. Two proficiency coded items out of a total 87 were found to be unsupported. Objectives V 6d and VI 1I deal with adjusting the NTS switch and safetying engine accessories. Training personnel and SMEs should review these POI items for continued use in the POI.

Table 73 displays examples of tasks not referenced to POI J3ABR2A631B-001. In addition to having high percentage of members performing, some of them have high TE and TD ratings. SMEs and training personnel should review these tasks and others rated high in TE, TD, and percent members performing for possible inclusion in the POI.

TABLE 71

EXAMPLES OF J3ABR2A631E-006 COURSE OBJECTIVES
WITH 30 PERCENT OR LESS MEMBERS PERFORMING

POI REFERENCE/TASKS	POI		ISI ENL (N=99)		ISK DIFF	
	1	2	3	4	5	6
I 7g Given an F110 engine, technical orders, support equipment, and working as a team member, operate transportation equipment with no more than two errors	9	11				3.73
P797 Operationally check engine installation/removal trailers						
I 10a Given an exhaust nozzle trainer, technical orders, and working as a team member, remove an exhaust nozzle divergent flap with no more than two errors	27	28				5.10
K525 Assemble or disassemble afterburners of augmentors						
IV 1b Given a portable hoist, and working as a team member, correctly operate the portable hoist to remove the LPT	22	21				6.30
K592 Remove or replace turbine modules						
IV 1c Given an engine trainer, technical orders, support equipment, and working as a team member, remove the LPT	22	21				6.30
K592 Remove or replace turbine modules						
IV 2b Given an engine trainer, technical orders, support equipment, and working as a team member, install the LPT	22	21				6.30
K592 Remove or replace turbine modules						

TABLE 72

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 2A6X1B GROUP MEMBERS AND NOT REFERENCED TO THE STS (PERCENT MEMBERS PERFORMING)

TASKS	TSI	BAFSC	DAFSC	TNG	TASK DIF
	ENI (N=342)	2A6SB (N=673)	2A6TB (N=334)	EMP	
G213 Inspect engines before and after operation	64	70	60	3.74	5.13
G238 Leak check operating engines	58	66	54	3.73	4.20
G172 Adjust engine system components	53	65	57	4.79	5.16
G227 Inspect turbine inlet temperature (TIT) systems	53	62	54	4.41	5.16
J521 Service propeller systems	54	58	51	5.77	4.87
H440 remove or replace dome shells	52	51	49	4.34	4.97

* Training Emphasis has an average of 1.91 and a standard deviation of 1.38 (High TE=3.29)

** Task Difficulty is 5.00, and the standard deviation is 1.00

TABLE 73

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE 2A6X1B
 FIRST-ENLISTMENT PERSONNEL AND NOT REFERENCED TO THE POI
 (PERCENT MEMBERS PERFORMING)

TASKS	INC EMP	1ST ENL PERCENT MEMBERS PERFORMING (N=342)	TASK DIF
G229 Inspect turbine rotor blades	4.11	56	5.35
G211 Inspect engine stator vanes	3.29	54	4.68
G195 Inspect accessory gearboxes	3.35	50	4.50

* Training Emphasis has an average of 1.91 and a standard deviation of 1.38 (High TE=3.29)

** Task Difficulty is 5.00, and the standard deviation is 1.00

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. Therefore, the survey booklet included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were analyzed by making several comparisons: (1) among TAFMS groups of the AFSC 2A6X1A/B career ladders and a comparative sample of personnel from other Mission Equipment Management Group AFSCs surveyed in 1995; (2) between current and previous survey TAFMS groups; and (3) across specialty groups identified in the **SPECIALTY JOBS** section of the report.

AFSC 2A6X1A

Table 74 compares Active Duty first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data to corresponding enlistment groups from other Mission Equipment Management Group AFSCs surveyed in 1995. These data give a relative measure of how the job satisfaction of AFSC 2A6X1A personnel compares with similar Air Force specialties. Aerospace Propulsion, Jet Engine personnel reported generally the same job satisfaction figures as those members of the comparative sample. The first-enlistment group rated their perceived use of talents and training slightly higher than their counterparts in this category. While sense of accomplishment from job ratings are higher than the comparative sample for the first-enlistment group, reenlistment intentions for first-enlistment personnel is lower. Second-enlistment and career group members rate job interest, perceived use of talents and training, and sense of accomplishment about the same as their counterparts in the comparative sample. Both of these groups indicate higher reenlistment intentions than those in the comparative sample. The percentages of positive responses in these comparisons reflect a career ladder where personnel appear to be satisfied with their jobs.

An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 75, which presents TAFMS group data for 1996 survey respondents, and data from respondents in the last OSR of the career ladder in 1989 (454X0A/B). Generally, perceptions of job interest have decreased slightly for all three TAFMS groups. Job interest, perceived use of talents and training have also decreased slightly for all three groups. However, data from respondents indicates that reenlistment intentions have increased for all three TAFMS groups.

AFSC 2A6X1B

With the exception of reenlistment intentions, ratings from first-enlistment, second-enlistment, and career TAFMS group members in AFSC 2A6X1B are higher than the comparative sample. Table 76 shows an increase in job interest, perceived use of talents and training, and sense of accomplishment for all three TAFMS groups. Reenlistment intentions are lower than those in the comparative sample for both first-enlistment and second-enlistment group

TABLE 74

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A6X1A TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

	1-48 MONTHS			49-96 MONTHS			97+ MONTHS		
	2A6X1A COMP SAMPLE (N=988)	COMP SAMPLE (N=1,280)	2A6X1A COMP SAMPLE (N=627)	2A6X1A COMP SAMPLE (N=805)	2A6X1A COMP SAMPLE (N=1,852)	2A6X1A COMP SAMPLE (N=1,693)	2A6X1A COMP SAMPLE (N=1,852)	2A6X1A COMP SAMPLE (N=1,693)	
EXPRESSED JOB INTEREST									
INTERESTING	71	74	72	73	75	75	75	75	75
SO-SO	17	15	16	17	16	16	15	15	15
DULL	12	11	12	10	9	10	10	10	10
PERCEIVED USE OF TALENTS									
FAIRLY WELL TO PERFECT	82	81	81	82	83	83	83	83	83
NONE TO VERY LITTLE	18	19	19	18	17	17	17	17	17
PERCEIVED USE OF TRAINING									
FAIRLY WELL TO PERFECT	86	85	81	83	80	80	76	76	76
NONE TO VERY LITTLE	14	15	19	17	20	20	24	24	24
SENSE OF ACCOMPLISHMENT FROM JOB									
SATISFIED	71	58	73	71	73	73	73	73	73
NEUTRAL	14	42	13	28	13	13	10	10	10
DISSATISFIED	15	0	13	1	14	14	17	17	17
REENLISTMENT INTENTIONS									
YES OR PROBABLY YES	62	72	76	71	77	77	72	72	72
NO OR PROBABLY NO	38	13	23	11	7	7	9	9	9
WILL RETIRE	0	15	0	18	16	16	19	19	19

NOTE: Comparative data are from the Mission Equipment Management AFSCs surveyed in 1995
Columns may not add to 100 percent due to nonresponse and rounding

TABLE 75

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A6X1A TAFMS GROUPS IN
CURRENT STUDY TO 1989 AFSC 454X0A/B STUDY (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

	1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	1995 (N=988)	1989 (N=1,526)	1995 (N=627)	1988 (N=1,082)	1995 (N=1,852) (N=835)	1988 (N=835)
EXRESSED JOB INTEREST						
INTERESTING	71	76	72	76	75	78
SO-SO	17	15	16	16	16	14
DULL	12	8	12	7	9	7
PERCEIVED USE OF TALENTS						
FAIRLY WELL TO EXCELLENT	82	85	81	87	83	85
NONE TO VERY LITTLE	18	14	19	13	17	14
PERCEIVED USE OF TRAINING						
FAIRLY WELL TO PERFECT	86	87	81	84	80	84
NONE TO VERY LITTLE	14	12	19	15	14	16
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	62	60	76	73	77	74
NO OR PROBABLY NO	38	39	23	27	7	9
WILL RETIRE	0	*	0	*	16	16

TABLE 76

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A6X1B TAEMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

1-48 MONTHS			49-96 MONTHS			97+ MONTHS		
2A6X1B COMP. SAMPLE (N=224)			2A6X1B SAMPLE (N=139)			2A6X1B SAMPLE (N=319)		
EXPRESSED JOB INTEREST								
INTERESTING	78	74	74	73	73	77	75	75
SO-SO	18	15	15	17	17	14	15	15
DULL	4	11	11	10	10	8	10	10
PERCEIVED USE OF TALENTS								
FAIRLY WELL TO PERFECT	84	81	86	82	82	88	83	83
NONE TO VERY LITTLE	16	19	14	18	18	12	17	17
PERCEIVED USE OF TRAINING								
FAIRLY WELL TO PERFECT	94	85	90	83	83	85	76	76
NONE TO VERY LITTLE	6	15	10	17	17	15	24	24
SENSE OF ACCOMPLISHMENT FROM JOB								
SATISFIED	79	58	74	71	71	74	73	73
NEUTRAL	13	42	14	28	28	11	10	10
DISSATISFIED	8	0	12	1	1	15	17	17
REENLISTMENT INTENTIONS								
YES OR PROBABLY YES	56	72	69	71	71	76	72	72
NO OR PROBABLY NO	44	13	31	11	11	7	9	9
WILL RETIRE	0	15	1	18	18	16	19	19

NOTE: Comparative data are from the Mission Equipment Management AFSCs surveyed in 1995
Columns may not add to 100 percent due to nonresponse and rounding

members. The same Mission Equipment Management groups listed above for AFSC 2A6X1A, Aerospace Propulsion, Jet Engine, were used to compare job satisfaction indicators to the Aerospace Propulsion, Turboprop/Turboshaft AFSC. Sixteen percent of the 97+ months group indicate they will retire.

Table 77 gives an indication of changes in job satisfaction perceptions within the career ladder as it presents TAFMS group data for 1996 survey respondents, and data from respondents in the last OSR of the career ladder in 1989 (454X0A/B). With the exception of reenlistment intentions for first- and second-enlistment members, whose numbers have decreased since the last OSR, only slight changes have occurred in job interest, and perceived use of talents and training. As with the Jet Engine personnel above, AFSC 2A6X1B personnel appear to be satisfied with their jobs as indicated by the percentages of positive responses.

In addition, Active Duty job satisfaction data for identified job groups and clusters are provided at Table 78. Members across all identified clusters and jobs provided generally positive job satisfaction responses, with the exception of the Equipment Management Job. Members of this job group indicate they do not have much interest in their job (only 41 percent find the job interesting), however, 70 percent indicate they will reenlist. When looking at perceived use of talents and training, results are positive. Only the Equipment Management Job members indicate a somewhat low figure for perceived use of training. Little training, if any, is provided for personnel outside of the Supply AFSC for maintaining special tools and equipment.

AFRES AND ANG JOB SATISFACTION

Only job satisfaction indications across job groups and clusters could be accomplished for both AFRES and ANG members of the survey sample (see Tables 79 and 80), because of lack of TAFMS data. Responses to job interest, perceived use of talents and training, and sense of accomplishment are average to high for both AFRES and ANG personnel. Examples of personnel completely satisfied with their job are: AFRES Section NCOICs, Flightline Expediters; ANG Modular Engine Repair, Instructor; and Equipment Management Job members. The majority of AFRES and ANG members seem to be satisfied with their jobs.

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to ensure current data for use in evaluating the effectiveness of training within the Aerospace Propulsion specialties. Data compiled from this survey support the career structures of both AFSCs.

TABLE 77

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A6X1B TAFMS GROUPS IN CURRENT STUDY TO 1989 AFSC 454X0AA/B STUDY (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

	1-48 MONTHS			49-96 MONTHS			97+ MONTHS		
	1995 (N=224)	1989 (N=1,526)	1995 (N=139)	1988 (N=1,082)	1995 (N=319)	1988 (N=835)	1995 (N=319)	1988 (N=835)	
EXPRESSED JOB INTEREST									
INTERESTING	78	76	74	76	78	78	78	78	
SO-SO	18	15	15	16	14	14	14	14	
DULL	4	8	11	7	8	8	7	7	
PERCEIVED USE OF TALENTS									
FAIRLY WELL TO EXCELLENT	84	85	86	87	88	88	88	88	
NONE TO VERY LITTLE	16	14	14	13	12	12	12	12	
PERCEIVED USE OF TRAINING									
FAIRLY WELL TO PERFECT	94	87	90	84	85	85	84	84	
NONE TO VERY LITTLE	6	12	10	15	15	15	16	16	
REENLISTMENT INTENTIONS									
YES OR PROBABLY YES	56	60	69	73	77	77	75	75	
NO OR PROBABLY NO	44	39	31	27	7	7	9	9	
WILL RETIRE	0	*	0	*	16	16	16	16	

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to nonresponse and rounding

TABLE 78

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

	APPRENT F100 MAINT JOB (N=29)	FLTLINE ENGINE MAINT CLUSTER (N=135)	CUT CREW CHIEF JOB (N=65)	INSPEC- TION JOB (N=85)	IN SHOP CLUSTER (N=680)
EXPRESSED JOB INTEREST					
INTERESTING	72	78	55	64	70
SO-SO	14	14	25	22	18
DULL	14	8	18	14	12
PERCEIVED USE OF PATENTS					
FAIRLY WELL TO PERFECT	87	83	63	81	87
NONE TO VERY LITTLE	13	17	37	19	13
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	90	90	63	87	91
NONE TO VERY LITTLE	10	10	37	13	9
SENSE OF ACCOMPLISHMENT FROM JOB					
SATISFIED	69	80	71	69	77
NEUTRAL	17	10	11	14	6
DISSATISFIED	14	10	18	16	18
REINFORCEMENT IN INSTRUCTIONS					
YES OR PROBABLY YES	72	64	69	72	75
NO OR PROBABLY NO	28	30	26	27	21
WHILE RETIRING	0	4	5	1	3

TABLE 78 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

	GENERAL ENGINE MAINT CLUSTER (N=1,273)	TEST CELL CLUSTER (N=220)	JUNIOR TURBO- PROP JOB (N=49)	SECTION NCOIC JOB (N=110)	CAMS CLUSTER (N=77)
EXRESSED JOB INTEREST					
INTERESTING	87	81	80	83	65
SO-SO	11	13	16	17	25
DULL	2	6	4	4	10
PERCEIVED USE OF TALENTS					
FAIRLY WELL TO PERFECT	95	89	72	86	76
NONE TO VERY LITTLE	5	11	21	14	12
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	94	90	64	98	73
NONE TO VERY LITTLE	6	10	16	2	14
SENSE OF ACCOMPLISHMENT FROM JOB					
SATISFIED	88	77	75	75	65
NEUTRAL	8	13	12	18	22
DISSATISFIED	4	11	14	6	13
PROBABLY WILL RETIRE					
YES OR PROBABLY YES	80	78	78	78	69
NO OR PROBABLY NO	12	17	7	31	31
WILL RETIRE	8	5	15	0	15

TABLE 78 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

EXPRESSED JOB INTEREST	INTERESTING	78	70	58	61	90	5	5
PERCEIVED USE OF TALENT	FAIRLY WELL TO PERFECT	97	81	68	72	72	13	13
PERCEIVED USE OF TRAINING	FAIRLY WELL TO PERFECT	97	81	68	72	72	13	13
SENSE OF ACCOMPLISHMENT FROM JOB	SATISFIED	78	77	59	61	75	14	14
REINFORCEMENT INSTRUCTIONS	NEUTRAL	19	7	21	22	75	11	11
REINFORCEMENT INSTRUCTIONS	DISSATISFIED	3	16	20	17	75	22	22
YES OR PROBABLY YES	74	72	65	67	67	69	7	7
NO OR PROBABLY NO	26	26	28	11	11	69	7	7
WHILE RETIRE	0	2	7	22	22	22	22	22

TABLE 78 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ACTIVE DUTY)

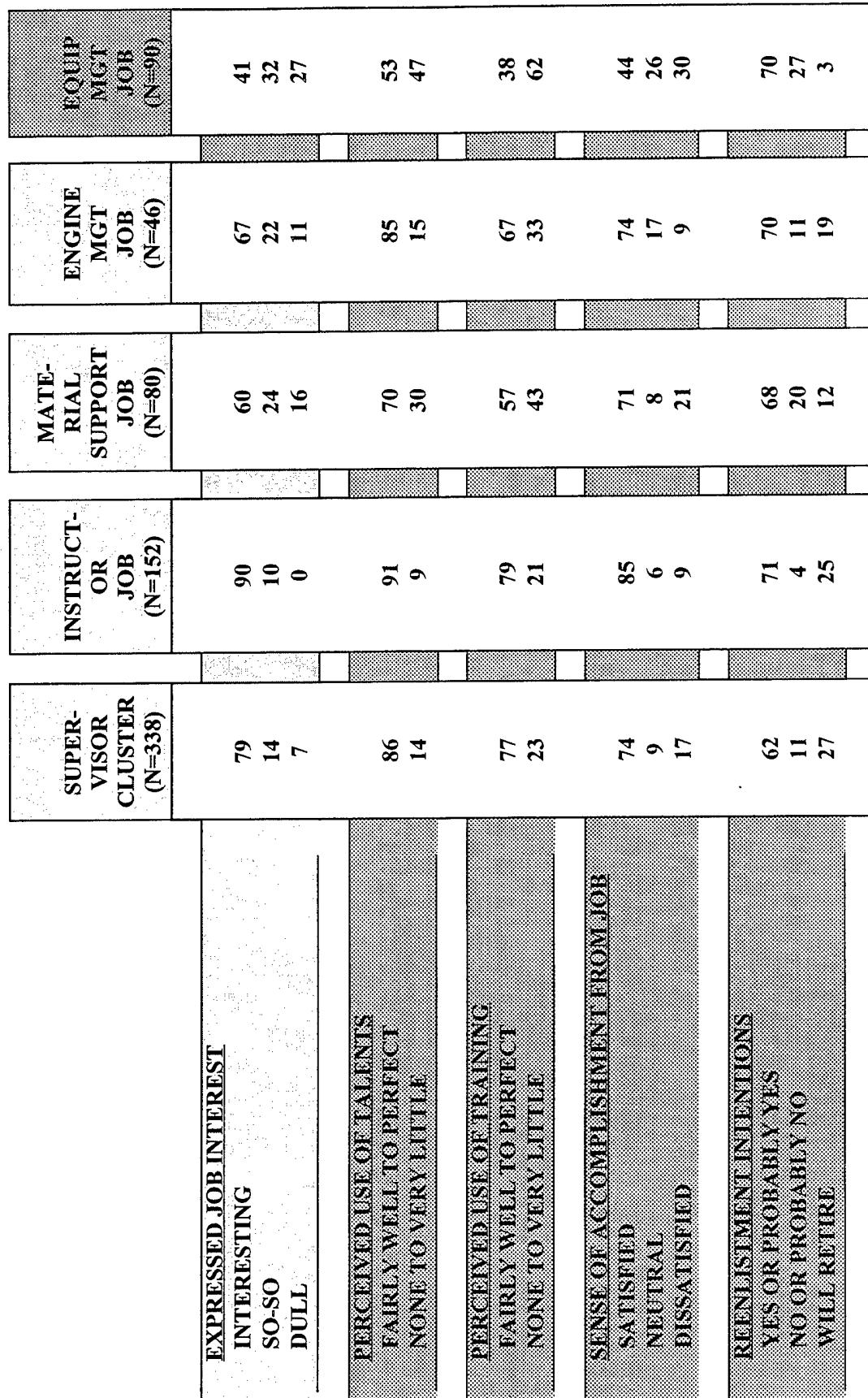


TABLE 79

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(AFRES)

EXPRESSED JOB INTEREST	APPRENT F100 MAINT JOB (N=3)	FLTLINE ENGINE MAINT CLUSTER (N=11)	CUT CREW CHIEF JOB (N=15)	INSPEC- TION JOB (N=59)	IN- SHOP CLUSTER (N=189)
INTERESTING	100	82	80	75	72
SO-SO	0	9	13	17	19
DULL	0	9	7	8	19
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	67	73	74	78	82
NONE TO VERY LITTLE	33	27	26	22	18
PERCEIVED USE OF TRAINING					
FAIRLY WELL TO PERFECT	67	73	87	81	85
NONE TO VERY LITTLE	33	27	13	19	15
SENSE OF ACCOMPLISHMENT FROM JOB					
SATISFIED	67	73	80	64	70
NEUTRAL	33	0	7	19	16
DISSATISFIED	0	27	13	17	14

TABLE 79 (CONTINUED)

OF JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(AFRES)

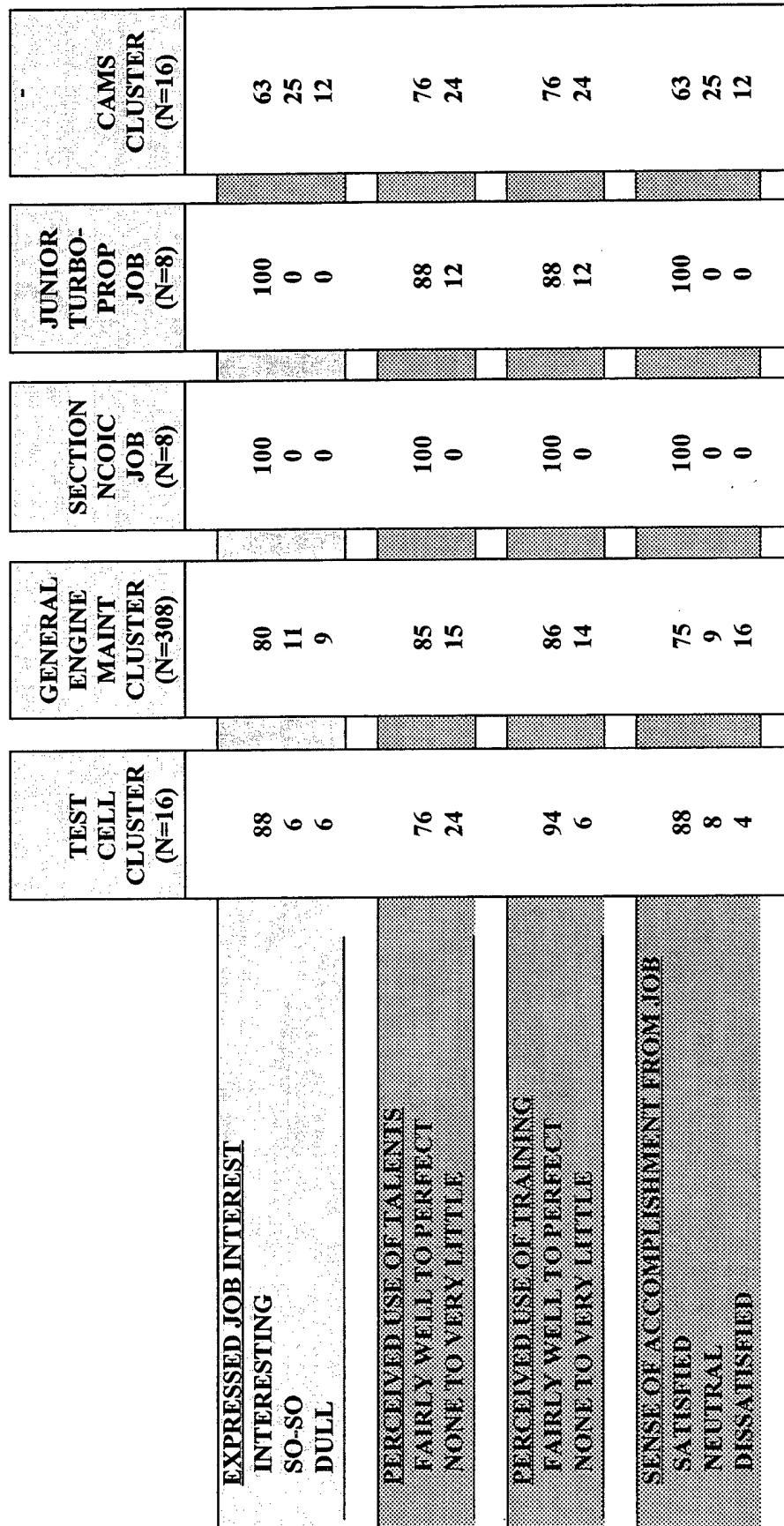


TABLE 79 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(AFRES)

MODULAR ENGINE REPAIR JOB (N=0)	IN-SHOP PROP JOB (N=7)	NON- POWER ESE/APG/ SGT CLUSTER (N=2)	FITLINE EXP- EDITERS JOB (N=1)	QA INSPECT- OR JOB (N=8)
EXRESSED JOB INTEREST				
INTERESTING	0	57	100	75
SO-SO	0	43	0	25
DULL	0	0	0	0
PERCEIVED USE OF TRAINING				
FAIRLY WELL TO PERFECT	0	86	50	88
NONE TO VERY LITTLE	0	14	50	12
SENSE OF ACCOMPLISHMENT FROM JOB				
SATISFIED	0	100	50	100
NEUTRAL	0	0	0	0
DISSATISFIED	0	0	0	12

TABLE 79 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(AFRES)

SUPER-VISOR CLUSTER (N=39)		INSTRUCT-OR JOB (N=6)		MATE-MATERIAL SUPPORT JOB (N=3)		ENGINEER MGT JOB (N=9)		EQUIP MGT JOB (N=2)	
EXPRESSIVE JOHNSONIST									
INTERESTING	87	100	100	89	89	100	100	100	100
SO-SO	8	0	0	0	0	0	0	0	0
BORING	5	0	0	11	11	0	0	0	0
PERCEIVED USE OF TALENTS									
FAIRLY WELL TO PERFECT	90	100	67	89	89	100	100	100	100
NONE TO VERY LITTLE	10	0	33	11	11	0	0	0	0
PERCEIVED USE OF TRAINING									
FAIRLY WELL TO PERFECT	97	83	67	89	89	50	50	50	50
NONE TO VERY LITTLE	3	17	33	11	11	0	0	0	0
SENSE OF ACCOMPLISHMENT FROM JOB									
SATISFIED	77	67	100	89	89	50	50	50	50
NEUTRAL	10	17	0	0	0	0	0	0	0
DISSATISFIED	13	16	0	11	11	0	0	0	0

TABLE 80

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ANG)

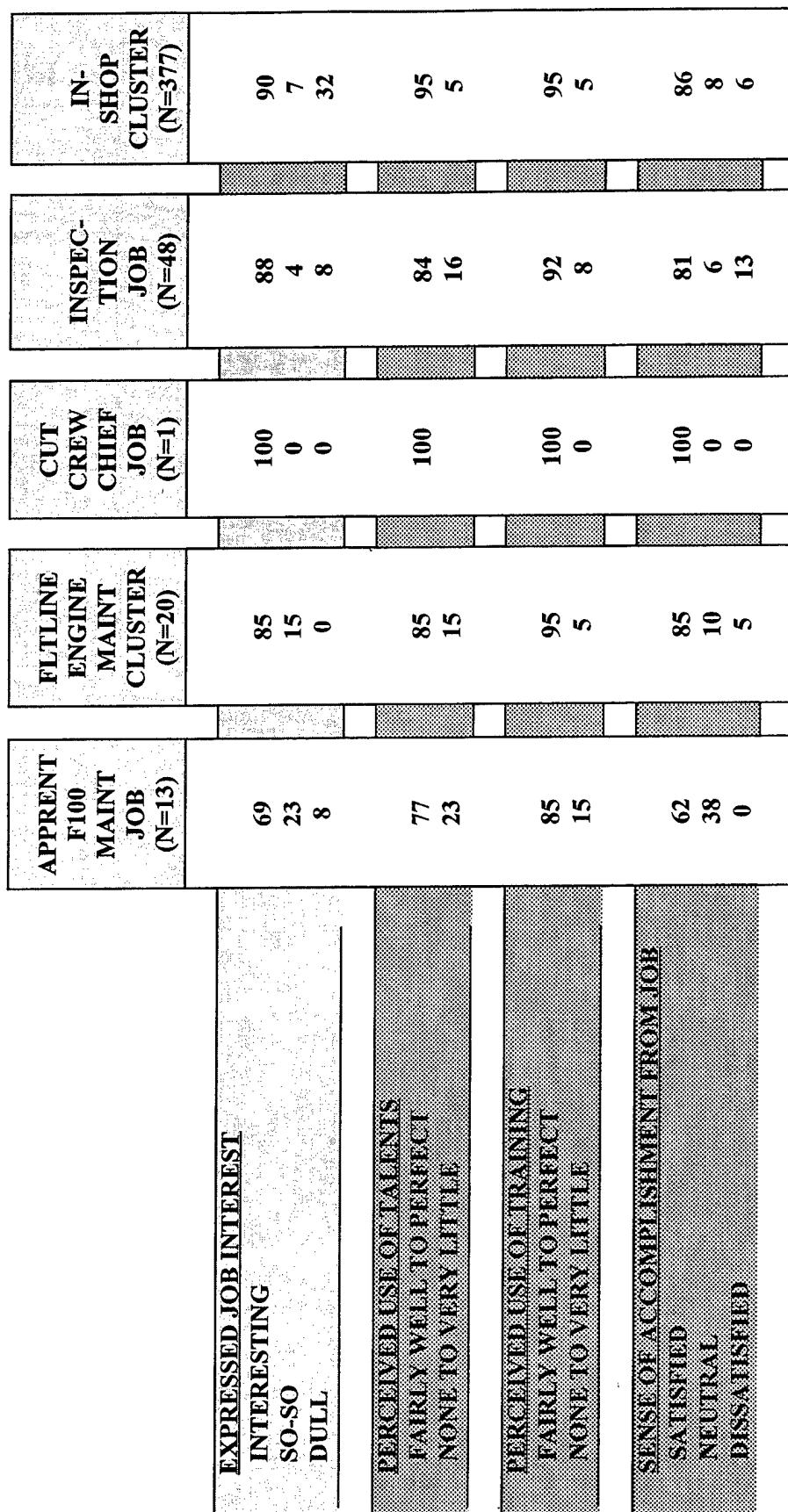


TABLE 80 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ANG)

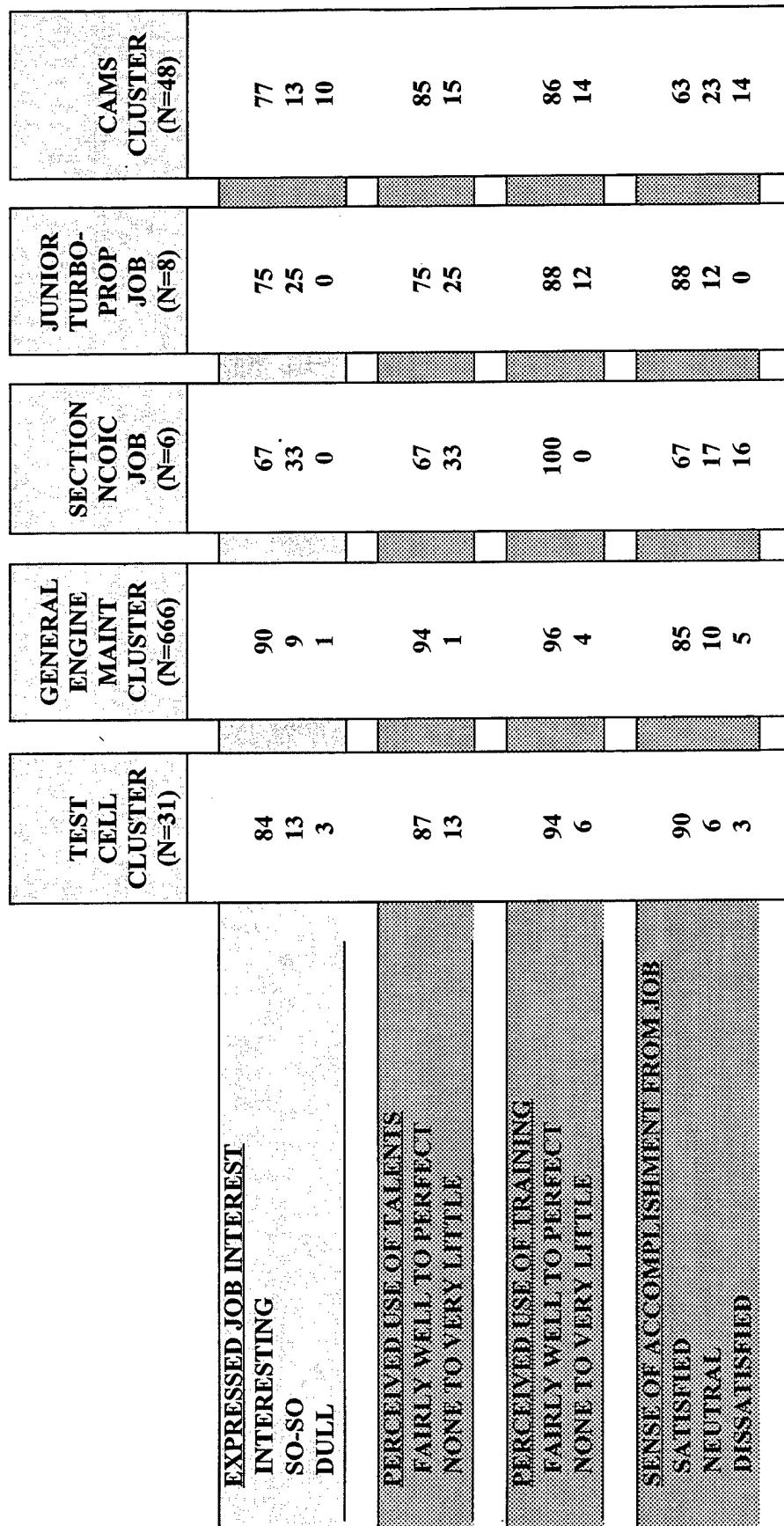


TABLE 80 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ANG)

MODULAR ENGINE REPAIR JOB (N=2)	100 0 0	81 17 2	82 9 9	97 3 0
EXPRESSED JOB INTEREST				
INTERESTING				
SO-SO				
DULL				
HARGRAVE WORK ENVIRONMENT				
FAIRLY WELL CORRECT	50	89	91	100
NONE TO VERY LITTLE	50	11	9	0
PERCEIVED USE OF TRAINING				
FAIRLY WELL TO PERFECT	50	94	91	100
NONE TO VERY LITTLE	50	6	9	0
SENSE OF ACCOMPLISHMENT/IMPROVEMENT				
SATISFIED	100	74	73	100
NEUTRAL	0	17	27	0
DISSATISFIED	0	9	0	0

TABLE 80 (CONTINUED)

JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS AND CLUSTERS (PERCENT MEMBERS RESPONDING)
(ANG)

		EXPRESSED JOB INTEREST			PERCEIVED USE OF TALENTS			PERCEIVED USE OF TRAINING			SENSE OF ACCOMPLISHMENT FROM JOB		
		INTERESTING	SO-SO	DULL	FAIRLY WELL TO PERFECT	NONE TO VERY LITTLE	FAIRLY WELL TO PERFECT	NONE TO VERY LITTLE	FAIRLY WELL TO PERFECT	NONE TO VERY LITTLE	SATISFIED	NEUTRAL	DISSATISFIED
		95	3	3	98	2	97	3	91	6	3	6	3
EQUIP- MGT JOB (N=2)													
ENGINE MGT JOB (N=13)													
MATE- RIAL SUPPORT JOB (N=6)													
INSTRUCT- OR JOB (N=2)													
SUPER- VISOR CLUSTER (N=80)													

Specialty Job Analysis indicates no big changes have occurred in AFSCs 2A6X1A or 2A6X1B 4T0X1 over the past 5 years. Furthermore, AFMAN 36-2108 *Specialty Descriptions* for the 2A6X1A and 2A6X1B AFSCs accurately portray the clusters and jobs identified in this study.

Skill-level analysis revealed a normal career progression pattern for both AFSCs for those Active Duty members of the survey sample. AFRES and ANG members follow an atypical career progression pattern in that they remain highly technical up to and including the 7-skill level. The pure supervisor for AFRES and ANG rests with 9-skill level personnel.

STS analysis revealed truly outstanding documents. All proficiency codes' elements in the AFSC 2A6X1A STS were fully supported by the career field. Only one proficiency-coded element in the AFSC 2A6X1B STS was not supported by the field. The five POIs that were analyzed revealed some elements that were not supported by survey data. Training managers and SMEs should review these documents and the Training Extract to determine if these elements warrant exclusion.

No serious job satisfaction problems appear to exist within the AFSC 2A6X1A or 2A6X1B career ladders. For the most part, respondents appear satisfied with their jobs. This holds true for Active Duty, AFRES and ANG members.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS

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TABLE A1
APPRENTICE F100 MAINTENANCE JOB
(STG422)

TASKS	PERCENT MEMBERS PERFORMING (N=45)
G294 Remove or replace engine gearbox modules	78
G296 Remove or replace engine magnetic chip detectors	78
G263 Place protective covers on engines	76
G271 Remove or replace accessory gearbox assemblies	73
G312 Remove or replace gearbox assemblies	71
G281 Remove or replace engine anti-icing system components	71
G206 Inspect engine magnetic chip detectors	71
G310 Remove or replace fan modules, fan sections, or fan components	69
G300 Remove or replace engine plumbing	69
G290 Remove or replace engine fan ducts	67
G273 Remove or replace afterburner or augmentor system components	67
G266 Prepare engines for shipment	67
G236 Install engines on transportation stands or trailers	64
G272 Remove or replace accessory gearbox assembly components	64
G360 Select and use hand tools	58
G373 Transfer engines to transportation trailers	58
G207 Inspect engine oil filters	58
G320 Remove or replace oil cooler assemblies	58
G298 Remove or replace engine oil system components	56
G306 Remove or replace events history recorders (EHRs)	56
G291 Remove or replace engine fuel manifolds or nozzles	56
G359 Seal, plug, or cap lines or openings	53
G311 Remove or replace fan turbine inlet temperature (FTIT) system components	51
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	49
G179 Blend engine fan blades	49

TABLE A2
FLIGHTLINE ENGINE MAINTENANCE CLUSTER
(STG346)

TASKS	PERCENT MEMBERS PERFORMING (N=166)
G187 Connect or disconnect external aircraft power	85
G238 Leak check operating engines	81
I499 Remove or replace engines in aircraft	77
G179 Blend engine fan blades	77
G360 Select and use hand tools	76
I495 Position maintenance stands for engine removals or installations	76
G365 Service engine oil systems	74
I496 Prepare aircraft for engine removals or installations	74
G210 Inspect engine plumbing	73
G188 Connect or disconnect test equipment to engines	71
G257 Perform ground observer duties	69
I476 Attach engines to aircraft installation or removal equipment	68
G263 Place protective covers on engines	66
G359 Seal, plug, or cap lines or openings	65
G213 Inspect engines before and after operation	65
I478 Connect or disconnect aircraft throttles to engine fuel controls	65
G207 Inspect engine oil filters	64
Q817 Position or remove aircraft chocks or pins	64
G300 Remove or replace engine plumbing	63
G194 Ground aircraft	63
G298 Remove or replace engine oil system components	62
G236 Install engines on transportation stands or trailers	61
G373 Transfer engines to transportation trailers	60
G281 Remove or replace engine anti-icing system components	60
G397 Troubleshoot engine oil systems	60

TABLE A3
CROSS UTILIZED TRAINED CREW CHIEF JOB
(STG387)

TASKS	PERCENT MEMBERS PERFORMING (N=81)
Q817 Position or remove aircraft chocks or pins	95
G187 Connect or disconnect external aircraft power	94
Q839 Tow aircraft	91
Q812 Launch or recover aircraft	90
Q844 Walk wings or tails during aircraft towing operations	83
Q816 Perform single-point or multipoint aircraft refueling or defueling	78
G263 Place protective covers on engines	74
G194 Ground aircraft	70
G238 Leak check operating engines	70
G360 Select and use hand tools	69
Q811 Jack or level aircraft	65
G365 Service engine oil systems	64
Q823 Remove or replace aircraft tires	59
G257 Perform ground observer duties	58
G364 Service CSD or IDG systems	57
G359 Seal, plug, or cap lines or openings	53
G206 Inspect engine magnetic chip detectors	52
I490 Perform home station checks of installed engines	51
G213 Inspect engines before and after operation	51
G191 Drain fuel filters	51
Q837 Service aircraft tires	49
Q833 Service aircraft hydraulic systems	49
G214 Inspect fuel filters	49
I499 Remove or replace engines in aircraft	48
G204 Inspect engine fan section components	47

TABLE A4

INSPECTION JOB
(STG588)

TASKS	PERCENT MEMBERS PERFORMING (N=192)
G210 Inspect engine plumbing	92
G207 Inspect engine oil filters	90
G214 Inspect fuel filters	89
G204 Inspect engine fan section components	88
G203 Inspect engine exhaust section components	85
G211 Inspect engine stator vanes	80
G206 Inspect engine magnetic chip detectors	79
G191 Drain fuel filters	78
G360 Select and use hand tools	74
G212 Inspect engine trailers or stands	74
G263 Place protective covers on engines	72
G198 Inspect engine bleed valves and actuators	71
G200 Inspect engine compressors	69
G300 Remove or replace engine plumbing	69
G179 Blend engine fan blades	67
G199 Inspect engine combustion sections	67
G236 Install engines on transportation stands or trailers	67
G359 Seal, plug, or cap lines or openings	66
G202 Inspect engine electrical components	66
G205 Inspect engine hydraulic systems	61
G213 Inspect engines before and after operation	61
G365 Service engine oil systems	60
G226 Inspect turbine exhaust cases	60
G201 Inspect engine controls	59
G195 Inspect accessory gearboxes	58

TABLE A5
IN-SHOP CLUSTER
(STG528)

TASKS	PERCENT MEMBERS PERFORMING (N=1,216)
G300 Remove or replace engine plumbing	93
G210 Inspect engine plumbing	92
G263 Place protective covers on engines	91
G207 Inspect engine oil filters	90
G298 Remove or replace engine oil system components	88
G360 Select and use hand tools	87
G291 Remove or replace engine fuel manifolds or nozzles	86
G236 Install engines on transportation stands or trailers	86
G203 Inspect engine exhaust section components	86
G359 Seal, plug, or cap lines or openings	85
G211 Inspect engine stator vanes	85
G214 Inspect fuel filters	84
G266 Prepare engines for shipment	84
G312 Remove or replace gearbox assemblies	84
G179 Blend engine fan blades	83
G204 Inspect engine fan section components	83
G206 Inspect engine magnetic chip detectors	83
G289 Remove or replace engine exhaust section components	83
G199 Inspect engine combustion sections	82
G271 Remove or replace accessory gearbox assemblies	82
G282 Remove or replace engine bearings	82
G200 Inspect engine compressors	81
G373 Transfer engines to transportation trailers	80
G229 Inspect turbine rotor blades	80
G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles	79

TABLE A6

TEST CELL CLUSTER
(STG444)

TASKS	PERCENT MEMBERS PERFORMING (N=267)
M680 Inspect test cell support equipment	99
M679 Inspect engines before and after installation in test cells	97
M695 Remove or replace engines in test stands	97
M681 Inspect test cells	97
M683 Maintain test cell support equipment	96
M684 Maintain test cells	95
M674 Analyze engine operation data during test cell runs	94
M685 Operate test cells	94
M678 Connect or disconnect test cell throttle-to-engine fuel controls	94
M686 Operationally check engines installed on test cells	93
G238 Leak check operating engines	92
M677 Compute engine parameters on test cell engines	91
M697 Service test cell fluid tanks	91
G188 Connect or disconnect test equipment to engines	90
G213 Inspect engines before and after operation	89
G365 Service engine oil systems	89
G369 Take oil analysis program (OAP) samples	88
M693 Preoperationally check engines in test stands	88
G236 Install engines on transportation stands or trailers	87
M692 Postoperationally check engines in test stands	87
G360 Select and use hand tools	85
G263 Place protective covers on engines	85
G400 Troubleshoot engine stalls	84
G262 Perform vibration analyses	84
G397 Troubleshoot engine oil systems	84

TABLE A7
GENERAL ENGINE MAINTENANCE CLUSTER
(STG586)

TASKS	PERCENT MEMBERS PERFORMING (N=2,247)
G210 Inspect engine plumbing	95
G213 Inspect engines before and after operation	93
G187 Connect or disconnect external aircraft power	93
G207 Inspect engine oil filters	93
G238 Leak check operating engines	91
G214 Inspect fuel filters	91
G298 Remove or replace engine oil system components	91
G365 Service engine oil systems	90
G360 Select and use hand tools	90
G188 Connect or disconnect test equipment to engines	90
G300 Remove or replace engine plumbing	89
G203 Inspect engine exhaust section components	89
G236 Install engines on transportation stands or trailers	89
G359 Seal, plug, or cap lines or openings	87
G397 Troubleshoot engine oil systems	87
G263 Place protective covers on engines	85
G257 Perform ground observer duties	85
G401 Troubleshoot engine starter systems	85
G314 Remove or replace ignition system components	85
G281 Remove or replace engine anti-icing system components	84
G212 Inspect engine trailers or stands	83
I495 Position maintenance stands for engine removals or installations	83
G256 Perform flex borescope inspections of engines	83
G201 Inspect engine controls	83
G351 Rig engine throttle control systems	82

TABLE A8

SECTION NCOIC JOB
(STG281)

TASKS	PERCENT MEMBERS PERFORMING (N=124)
A1 Assign maintenance and repair work	94
A8 Determine work priorities	90
F159 Inspect areas for foreign object damage (FOD) items	85
A20 Plan or schedule work assignments	81
G210 Inspect engine plumbing	81
B31 Counsel personnel on personal or military-related matters	81
A5 Coordinate work on engine components with appropriate agencies	81
A21 Plan or schedule work priorities	80
B52 Supervise Aerospace Propulsion Apprentice, Jet Engines (AFSC 2A631A)	77
D88 Annotate training records	77
G203 Inspect engine exhaust section components	76
C84 Write enlisted performance reports	74
C63 Conduct performance feedback worksheet sessions	74
D93 Conduct OJT	71
B56 Supervise Aerospace Propulsion Journeyman, Jet Engines (AFSC 2A651A)	69
C80 Inspect personnel for compliance with military standards	69
G212 Inspect engine trailers or stands	69
F160 Inspect engines or associated equipment for corrosion	68
A17 Establish performance standards for subordinates	68
D106 Evaluate progress of trainees	68
D105 Evaluate personnel for training needs	67
C85 Write recommendations for awards and decorations	67
C79 Inspect in-shop maintenance actions	66
D96 Counsel trainees on training progress	66
G263 Place protective covers on engines	66

TABLE A9
JUNIOR TURBOPROP MAINTENANCE JOB
(STG432)

TASKS	PERCENT MEMBERS PERFORMING (N=65)
H450 Remove or replace propeller brush blocks	91
H444 Remove or replace front spinner cones (noses)	88
G360 Select and use hand tools	85
G365 Service engine oil systems	85
G187 Connect or disconnect external aircraft power	83
G303 Remove or replace engine tail pipes	83
G188 Connect or disconnect test equipment to engines	82
H449 Remove or replace propeller anti-icing afterbodies	77
G359 Seal, plug, or cap lines or openings	74
G298 Remove or replace engine oil system components	74
G214 Inspect fuel filters	74
G207 Inspect engine oil filters	72
I495 Position maintenance stands for engine removals or installations	69
H423 Adjust propeller blade angles	69
G323 Remove or replace portions of cowling, nacelles, access doors, or panels	68
J520 Remove or replace propellers on aircraft	68
G236 Install engines on transportation stands or trailers	68
H447 Remove or replace pitch lock regulators	68
G350 Rig engine control linkages	66
G351 Rig engine throttle control systems	66
G305 Remove or replace engine-to-aircraft throttle rigging system components	66
J521 Service propeller systems	65
H458 Remove or replace valve housings	65
G332 Remove or replace temperature datum system components	65
G206 Inspect engine magnetic chip detectors	63

TABLE A10

CAMS CLUSTER
(STG184)

TASKS	PERCENT MEMBERS PERFORMING (N=141)
R846 Access core automated maintenance system (CAMS) menus and data screens	95
R848 Change CAMS performing workcenter codes	95
R849 Change CAMS workcenter event narratives	94
R850 Change equipment maintenance discrepancies in CAMS	92
R851 Conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance	88
R847 Analyze CAMS data	87
R852 Conduct CAMS interface with base supply	86
R859 Document maintenance actions in CAMS	85
R856 Correct CAMS errors noted during daily verification process	83
R853 Conduct CAMS training	80
R855 Conduct CAMS uncompleted maintenance event listings	79
R854 Conduct CAMS training status inquiries	79
R857 Create CAMS job flow packages	79
R866 Load part numbers or serial numbers in CAMS	77
R863 Initiate equipment maintenance discrepancies in CAMS	74
R858 Defer equipment maintenance records in CAMS	74
R865 Input supply data in CAMS	73
R860 Establish CAMS historical reports	73
R868 Start or stop CAMS job following events	72
Q844 Walk wings or tails during aircraft towing operations	70
R862 Initiate deficiency or service reports in CAMS	70
Q845 Wash aircraft	69
R873 Verify accuracy of CAMS daily inputs	68
R869 Track CAMS job following events	68
R861 Implement CAMS workcenter training programs	67

TABLE A11
MODULAR ENGINE REPAIR JOB
(STG600)

TASKS	PERCENT MEMBERS PERFORMING (N=33)
G179 Blend engine fan blades	97
G229 Inspect turbine rotor blades	97
G309 Remove or replace fan blades	97
K525 Assemble or disassemble afterburners or augmentors	94
G196 Inspect afterburners or augmentors	94
G282 Remove or replace engine bearings	94
G285 Remove or replace engine carbon seals	94
G265 Prepare engine modules for shipment	91
G178 Blend engine compressor blades	91
G226 Inspect turbine exhaust cases	88
G211 Inspect engine stator vanes	85
G184 Clean engine parts using cleaners, other than ultrasonic cleaners	85
G230 Inspect turbine rotors	85
K596 Repair afterburner or augmentor components	82
G228 Inspect turbine nozzles	82
G217 Inspect IGVs	79
G204 Inspect engine fan section components	76
K538 Clean and inspect engine bearings	76
G209 Inspect engine or engine module containers	76
K526 Assemble or disassemble compressor units	73
R846 Access core automated maintenance system (CAMS) menus and data screens	73
K537 Blend engine turbine blades	73
G170 Adjust afterburner or augmentor nozzle areas	70
G360 Select and use hand tools	70
F159 Inspect areas for foreign object damage (FOD) items	70

TABLE A12
IN-SHOP PROPELLER JOB
(STG226)

TASKS	PERCENT MEMBERS PERFORMING (N=103)
H458 Remove or replace valve housings	98
H450 Remove or replace propeller brush blocks	97
H456 Remove or replace pump housings	96
H461 Rework propeller blade nicks, burrs, or scratches	94
H449 Remove or replace propeller anti-icing afterbodies	93
H447 Remove or replace pitch lock regulators	93
L635 Install dome preformed packings	91
H432 Inspect propellers or related components	90
L661 Remove or replace rear spinners	90
H423 Adjust propeller blade angles	90
H430 Drain hydraulic oil from propeller components	89
L640 Leak check propeller assemblies	89
H427 Clean propeller system hydraulic oil filters	88
H459 Repair cuffs, afterbodies, or spinners	88
L633 Crate or uncrate propellers	88
H428 Clean propellers or related components, other than hydraulic oil filters	87
L618 Assemble or disassemble brush block assemblies	87
L620 Assemble or disassemble pump housings	87
L653 Remove or replace propeller blade deicing brush block assembly components	87
H464 Spray paint propeller tips or blade data sections	87
H454 Remove or replace propeller system hydraulic oil filters	86
L658 Remove or replace propeller blades in hubs	86
L619 Assemble or disassemble dome assemblies	86
L638 Install propeller hub preformed packings	86
H440 Remove or replace dome shells	86

TABLE A13

NONPOWERED ENGINE SUPPORT EQUIPMENT (ESE)/
AUXILIARY POWER UNIT (APR)/SMALL GAS TURBINE (SGT) CLUSTER
(STG064)

TASKS	PERCENT MEMBERS PERFORMING (N=144)
P792 Inspect and service engine trailer tires	74
P788 Clean and pack engine trailer wheel bearings	69
P790 Clean engine trailers or stands	67
P799 Paint and mark nonpowered engine support equipment	67
P784 Adjust engine trailer brakes	66
P801 Perform periodic inspections of general support equipment	65
P787 Assemble or disassemble engine trailer wheel and hub assemblies	64
P791 Inspect and service engine trailer hydraulic systems	63
P796 Maintain inspection status of nonpowered support equipment	61
P793 Inspect nonpowered support equipment, other than engine-related	61
P786 Assemble or disassemble engine trailer parking brake assemblies	60
P797 Operationally check engine installation/removal trailers	59
R846 Access core automated maintenance system (CAMS) menus and data screens	58
P785 Adjust trailer assemblies	55
E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits	52
P802 Remove or replace engine trailer parking brake assembly components	52
E124 Inventory equipment or supplies	48
P804 Remove or replace lift cylinders on engine installation/removal trailers	46
R859 Document maintenance actions in CAMS	45
P789 Clean and pack support equipment wheel bearings, other than engine trailer wheel bearings	45
P795 Lubricate engine hoist assemblies	44
P800 Perform front-end alignment of engine trailers	44
P803 Remove or replace hydraulic pumps	42
A1 Assign maintenance and repair work	42
F159 Inspect areas for foreign object damage (FOD) items	41

TABLE A14
**FLIGHTLINE EXPEDITOR JOB
(STG551)**

TASKS	PERCENT MEMBERS PERFORMING (N=21)
A1 Assign maintenance and repair work	90
B33 Direct flightline maintenance activities	86
A8 Determine work priorities	86
A21 Plan or schedule work priorities	81
A20 Plan or schedule work assignments	71
A2 Assign personnel to duty positions	43
A5 Coordinate work on engine components with appropriate agencies	38
B28 Adjust daily maintenance plans to meet operational commitments	38
C84 Write enlisted performance reports	38
B47 Interpret policies, directives, or procedures for subordinates	33
B59 Supervise military personnel with AFSCs other than 2A6X1A/B	33
B31 Counsel personnel on personal or military-related matters	33
C85 Write recommendations for awards and decorations	33
C78 Inspect flightline maintenance actions	29
A6 Determine logistics requirements, such as space, personnel, or equipment	29
A17 Establish performance standards for subordinates	24
R846 Access core automated maintenance system (CAMS) menus and data screens	24
F159 Inspect areas for foreign object damage (FOD) items	24
C61 Analyze workload requirements	19
E142 Participate in predock or postdock meetings	19
F157 Evaluate in-process maintenance	19
Q812 Launch or recover aircraft	14
B45 Implement work methods	14
B41 Implement safety or security programs	14
E153 Verify mission capability (MICAP) conditions	14

TABLE A15
 QUALITY ASSURANCE INSPECTOR JOB
 (STG140)

TASKS	PERCENT MEMBERS PERFORMING (N=98)
F159 Inspect areas for foreign object damage (FOD) items	92
F158 Evaluate safety procedures	91
F156 Coordinate quality assurance problems with maintenance personnel	90
F157 Evaluate in-process maintenance	89
C78 Inspect flightline maintenance actions	84
F167 Review TO changes	84
F161 Perform activity inspections, such as self-inspections or quality assessment programs	83
C81 Investigate accidents or incidents	83
C70 Evaluate personnel for compliance with performance standards or TOs	79
A12 Develop quality assurance programs	78
C79 Inspect in-shop maintenance actions	77
C74 Evaluate TO improvement reports	76
F160 Inspect engines or associated equipment for corrosion	73
F155 Coordinate deficiency or service reports with appropriate agencies	72
F164 Perform initial inspections of modifications or TCTOs	71
A10 Develop inspection procedures	70
F166 Review engine deficiency, service, or status reports	63
C73 Evaluate suggestions	62
F165 Process dropped object reports	61
F168 Review unsatisfactory condition reports (UCRs)	61
C72 Evaluate safety or security programs	59
C67 Evaluate inspection report findings	57
E144 Perform inspections of special tools	56
C60 Analyze recurring troubles on equipment identified by deficiency or service reports	52
E143 Participate in time compliance technical order (TCTO) meetings, other than TCTO kit reconciliation meetings	52

TABLE A16

SUPERVISOR CLUSTER
(STG289)

TASKS	PERCENT MEMBERS PERFORMING (N=457)
B31 Counsel personnel on personal or military-related matters	91
A8 Determine work priorities	91
A20 Plan or schedule work assignments	84
C80 Inspect personnel for compliance with military standards	84
A21 Plan or schedule work priorities	83
C85 Write recommendations for awards and decorations	82
A2 Assign personnel to duty positions	82
A1 Assign maintenance and repair work	81
B47 Interpret policies, directives, or procedures for subordinates	80
A24 Schedule leaves	80
A17 Establish performance standards for subordinates	78
B30 Conduct supervisory orientations of newly assigned personnel	78
C70 Evaluate personnel for compliance with performance standards or TOs	74
C84 Write enlisted performance reports	74
B28 Adjust daily maintenance plans to meet operational commitments	73
A6 Determine logistics requirements, such as space, personnel, or equipment	73
C63 Conduct performance feedback worksheet sessions	72
C75 Evaluate work schedules	70
C61 Analyze workload requirements	68
C71 Evaluate personnel for promotion, demotion, or reclassification	68
A3 Assign sponsors for newly assigned personnel	67
A5 Coordinate work on engine components with appropriate agencies	65
B42 Implement self-inspection programs	64
A13 Develop self-inspection programs	63
C77 Indorse enlisted performance reports	62

TABLE A17
INSTRUCTOR JOB
(STG074)

TASKS	PERCENT MEMBERS PERFORMING (N=60)
D96 Counsel trainees on training progress	80
D88 Annotate training records	78
D87 Administer or score tests	77
D106 Evaluate progress of trainees	73
D97 Determine training requirements	58
D109 Maintain training records, charts, or graphs	57
D102 Direct or implement training programs	55
D108 Maintain training aids or equipment	52
D114 Write test questions	50
D104 Evaluate effectiveness of training programs	48
D94 Conduct resident course classroom training	47
D100 Develop performance tests	47
D107 Evaluate training methods and techniques	47
D105 Evaluate personnel for training needs	45
B31 Counsel personnel on personal or military-related matters	43
D111 Procure training aids, space, or equipment	40
D95 Conduct training conferences or briefings	35
C80 Inspect personnel for compliance with military standards	32
C84 Write enlisted performance reports	30
E124 Inventory equipment or supplies	30
D93 Conduct OJT	28
A7 Determine publication requirements	28
D112 Select personnel for specialized training	27
E134 Maintain property custodian authorization/custody receipt listings (CA/CRLs)	27
E129 Maintain D04, D18, D19, and M30 rosters	27

TABLE A18
MATERIAL SUPPORT JOB
(STG298)

TASKS	PERCENT MEMBERS PERFORMING (N=89)
E124 Inventory equipment or supplies	99
E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits	97
E126 Issue special tools	93
E144 Perform inspections of special tools	87
E147 Process damaged tools for distribution or replacement	79
E145 Perform shift security checks of tool cribs	75
E134 Maintain property custodian authorization/custody receipt listings (CA/CRLs)	73
E127 Maintain bench stock listings	72
E131 Maintain hazardous material areas	71
B31 Counsel personnel on personal or military-related matters	70
E129 Maintain D04, D18, D19, and M30 rosters	69
E133 Maintain microfiche or federal logistics (FEDLOG) files	69
A4 Coordinate calibration of special tools or test equipment with Precision Measurement Equipment Laboratory (PMEL)	69
A8 Determine work priorities	67
C84 Write enlisted performance reports	65
E128 Maintain due-in-from-maintenance (DIFM) transaction rosters	65
C63 Conduct performance feedback worksheet sessions	65
E119 Dress or resurface tools	65
A21 Plan or schedule work priorities	63
E148 Process DIFM items	63
E149 Process or package special tools for shipment or deployment	62
E118 Cycle torque wrenches	62
E152 Validate bench stock listings	61
A20 Plan or schedule work assignments	61
B47 Interpret policies, directives, or procedures for subordinates	61

TABLE A19
ENGINE MANAGEMENT JOB
(STG309)

TASKS	PERCENT MEMBERS PERFORMING (N=68)
O772 Update automated engine history records	91
O743 Maintain engine location or status files	90
O756 Prepare engine records for transfer	90
O753 Prepare consolidated engine management system (CEMS) reports	88
O729 Establish automated engine history files	88
O773 Update automated engine inventory, operating time, or reconciliation reports	82
B50 Report engine status	79
O749 Monitor time change and inspection requirements	79
O733 Initiate engine receiving or shipping reports	78
O726 Coordinate engine changes with appropriate agencies	76
O731 Forecast time change replacement items	76
O774 Update automated engine performance or maintenance data	75
R846 Access core automated maintenance system (CAMS) menus and data screens	74
O775 Update automated engine removal or installation data	74
O781 Verify documentation of repaired engines or engine modules	74
O728 Coordinate time change items with aircraft plans and scheduling	74
O776 Update automated engine time change and inspection records	71
O744 Maintain engine master roster listings	71
O752 Post spare engine status boards	69
O762 Record engine performance or maintenance data	69
O735 Initiate message reports relating to engine status	69
O768 Track engine removals or installations at transient locations	69
O724 Annotate TCTO records	69
O771 Track repair of engines or engine modules	68
O761 Reconcile computer rejects	68

TABLE A20
EQUIPMENT MANAGEMENT JOB
(STG278)

TASKS	PERCENT MEMBERS PERFORMING (N=94)
E126 Issue special tools	95
E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits	91
E124 Inventory equipment or supplies	86
E144 Perform inspections of special tools	69
E145 Perform shift security checks of tool cribs	62
E147 Process damaged tools for distribution or replacement	55
E127 Maintain bench stock listings	47
E136 Maintain special tools calibration records	47
E131 Maintain hazardous material areas	46
A4 Coordinate calibration of special tools or test equipment with Precision Measurement Equipment Laboratory (PMEL)	45
E118 Cycle torque wrenches	43
E150 Review and update PMEL listings	40
E119 Dress or resurface tools	40
E152 Validate bench stock listings	37
R846 Access core automated maintenance system (CAMS) menus and data screens	34
E149 Process or package special tools for shipment or deployment	29
E137 Maintain TO publication files	28
E139 Monitor hazardous waste programs	28
E141 Monitor precious metals programs	26
E133 Maintain microfiche or federal logistics (FEDLOG) files	24
E130 Maintain equipment control listings (ECLs)	23
E129 Maintain D04, D18, D19, and M30 rosters	21
E134 Maintain property custodian authorization/custody receipt listings (CA/CRLs)	19
R852 Conduct CAMS interface with base supply	19
E148 Process DIFM items	19

APPENDIX B
LISTING OF MODULES AND TASK STATEMENTS

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These task modules (TMs) were developed in order to organize and summarize the extensive task information of this specialty. The TMs were developed by clustering tasks which are coperformed by the same incumbents. Coperformance is a measure of how probable a task will be performed with another task, based upon the responses of surveyed personnel. For example, if an individual performs one nuclear weapons safety task, the probability is very high that he or she will perform other nuclear weapons safety tasks. Thus, the group of nuclear weapons safety tasks can be considered a "natural group" of associated or related tasks (see TM 0013) below). The statistical clustering generally approximates these "natural groupings."

The title of each TM is a best estimate as to the generic subject content of the group of tasks. The TMs are useful for organizing the task data into meaningful units and as a way to concisely summarize the extensive job data. However, TMs are only one way to organize the information. Other strategies may also be valid.

0001 ST0477 General Engine Inspections

- 1 G191 Drain fuel filters
- 2 G195 Inspect accessory gearboxes
- 3 G198 Inspect engine bleed valves and actuators
- 4 G199 Inspect engine combustion sections
- 5 G200 Inspect engine compressors
- 6 G201 Inspect engine controls
- 7 G202 Inspect engine electrical components
- 8 G203 Inspect engine exhaust section components
- 9 G204 Inspect engine fan section components
- 10 G206 Inspect engine magnetic chip detectors
- 11 G207 Inspect engine oil filters
- 12 G210 Inspect engine plumbing
- 13 G211 Inspect engine stator vanes
- 14 G212 Inspect engine trailers or stands
- 15 G213 Inspect engines before and after operation
- 16 G214 Inspect fuel filters
- 17 G236 Install engines on transportation stands or trailers
- 18 G256 Perform flex borescope inspections of engines
- 19 G261 Perform rigid borescope inspections of engines
- 20 G263 Place protective covers on engines
- 21 G359 Seal, plug, or cap lines or openings
- 22 G360 Select and use hand tools
- 23 G373 Transfer engines to transportation trailers

0002 ST0478 Engine Systems Component/Accessories R&R

- 1 G264 Prepare engine components for shipment
- 2 G266 Prepare engines for shipment
- 3 G271 Remove or replace accessory gearbox assemblies
- 4 G272 Remove or replace accessory gearbox assembly components
- 5 G281 Remove or replace engine anti-icing system components
- 6 G283 Remove or replace engine bleed air system components

0002 ST0478 Engine Systems Component/Accessories R&R (Continued)

- 7 G288 Remove or replace engine electrical components
- 8 G289 Remove or replace engine exhaust section components
- 9 G291 Remove or replace engine fuel manifolds or nozzles
- 10 G292 Remove or replace engine fuel system components, other than fuel manifolds or nozzles
- 11 G296 Remove or replace engine magnetic chip detectors
- 12 G298 Remove or replace engine oil system components
- 13 G300 Remove or replace engine plumbing
- 14 G314 Remove or replace ignition system components
- 15 G320 Remove or replace oil cooler assemblies

0003 ST0413 In-Shop Inspections

- 1 G205 Inspect engine hydraulic systems
- 2 G208 Inspect engine or accessory splines
- 3 G216 Inspect IGV actuating systems
- 4 G217 Inspect IGVs
- 5 G223 Inspect starter assemblies
- 6 G226 Inspect turbine exhaust cases
- 7 G228 Inspect turbine nozzles
- 8 G229 Inspect turbine rotor blades
- 9 G230 Inspect turbine rotors

0004 ST0269 In-Shop Repair

- 1 G209 Inspect engine or engine module containers
- 2 G265 Prepare engine modules for shipment
- 3 G282 Remove or replace engine bearings
- 4 G285 Remove or replace engine carbon seals
- 5 G286 Remove or replace engine combustion sections or components
- 6 G290 Remove or replace engine fan ducts
- 7 G293 Remove or replace engine gearbox drive shafts
- 8 G294 Remove or replace engine gearbox modules
- 9 G295 Remove or replace engine hydraulic system components
- 10 G299 Remove or replace engine or engine module components in shipping containers
- 11 G309 Remove or replace fan blades
- 12 G310 Remove or replace fan modules, fan sections, or fan components
- 13 G312 Remove or replace gearbox assemblies
- 14 G317 Remove or replace main gearbox assembly components
- 15 K548 Inspect engine fuel manifolds
- 16 K549 Inspect engine fuel nozzles
- 17 K587 Remove or replace engines on maintenance stands and adapters

0005 ST0394 Afterburner/Augmenter Maintenance

- 1 G196 Inspect afterburners or augmentors
- 2 G273 Remove or replace afterburner or augmentor system components
- 3 G304 Remove or replace engine variable exhaust nozzle system components
- 4 K525 Assemble or disassemble afterburners or augmentors
- 5 K580 Remove or replace afterburners or augmentors
- 6 K596 Repair afterburner or augmentor components

0006 ST0444 F100 Engine In-Shop Maintenance

- 1 G275 Remove or replace compressor inlet variable vane (CIVV) system components
- 2 G306 Remove or replace events history recorders (EHRs)
- 3 G311 Remove or replace fan turbine inlet temperature (FTIT) system components
- 4 G324 Remove or replace rear compressor variable vane (RCVV) system components
- 5 G347 Rig afterburner or augmentor systems
- 6 G348 Rig CIVV systems
- 7 G353 Rig RCVV actuators
- 8 G354 Rig RCVVs to backup or unified fuel controls

0007 ST0471 Flightline Engine Maintenance

- 1 G172 Adjust engine system components
- 2 G173 Adjust operating engines
- 3 G187 Connect or disconnect external aircraft power
- 4 G188 Connect or disconnect test equipment to engines
- 5 G194 Ground aircraft
- 6 G238 Leak check operating engines
- 7 G257 Perform ground observer duties
- 8 G365 Service engine oil systems

0008 ST0443 Engine Rigging

- 1 G305 Remove or replace engine-to-aircraft throttle rigging system components
- 2 G323 Remove or replace portions of cowling, nacelles, access doors, or panels
- 3 G350 Rig engine control linkages
- 4 G351 Rig engine throttle control systems

0009 ST0730 Remove or Replace Aircraft Engines

- 1 I476 Attach engines to aircraft installation or removal equipment
- 2 I478 Connect or disconnect aircraft throttles to engine fuel controls
- 3 I495 Position maintenance stands for engine removals or installations
- 4 I496 Prepare aircraft for engine removals or installations
- 5 I499 Remove or replace engines in aircraft

0010 ST0439 Flightline Troubleshooting

- 1 G382 Troubleshoot EGT, TIT, FTIT or interstage turbine temperature (ITT) systems
- 2 G383 Troubleshoot electrical or electronic malfunctions
- 3 G386 Troubleshoot engine anti-icing systems
- 4 G387 Troubleshoot engine bleed air systems
- 5 G389 Troubleshoot engine control linkage systems
- 6 G391 Troubleshoot engine fuel systems
- 7 G394 Troubleshoot engine indicating systems
- 8 G397 Troubleshoot engine oil systems
- 9 G400 Troubleshoot engine stalls
- 10 G401 Troubleshoot engine starter systems
- 11 G405 Troubleshoot flameouts
- 12 G406 Troubleshoot ignition systems
- 13 G409 Troubleshoot oil cooler assemblies
- 14 I506 Troubleshoot engine-to-aircraft throttle rigging systems

0011 ST0254 APU/SGT Flightline Maintenance

- 1 I504 Troubleshoot auxiliary power systems
- 2 N699 Adjust auxiliary power unit (APU) or small gas turbine (SGT) components
- 3 N703 Inspect APUs or SGTs
- 4 N707 Operate installed APUs or SGTs
- 5 N708 Operationally check APUs or SGTs
- 6 N709 Perform APU or SGT home station inspections
- 7 N710 Perform phase or isochronal inspections of APUs or SGTs
- 8 N712 Remove or replace APU or SGT components
- 9 N713 Remove or replace APU or SGT QEC kits
- 10 N714 Remove or replace APUs or SGTs
- 11 N717 Service APUs or SGTs
- 12 N721 Troubleshoot APU or SGT associated systems
- 13 N722 Troubleshoot APUs or SGTs

0012 ST0352 Engine Trim

- 1 G242 Operate engine trim boxes
- 2 G339 Remove or replace trim equipment
- 3 G376 Trim operating engines
- 4 I474 Analyze engine operation data during trim pad runs
- 5 I477 Compute engine operating data during trim pad runs
- 6 I503 Trim installed engines

0013 ST0451 Thrust Reverser Maintenance

- 1 G224 Inspect thrust reverser system components
- 2 G247 Operationally check thrust reverser mechanical and electrical systems
- 3 G334 Remove or replace thrust reverser assemblies
- 4 G335 Remove or replace thrust reverser assembly components

0013 ST0451 Thrust Reverser Maintenance (Continued)

- 5 G356 Rig thrust reverser systems
- 6 G413 Troubleshoot thrust reverser systems
- 7 I479 Deactivate or reactivate thrust reverser systems

0014 ST0181 Crew Chief Duties

- 1 Q811 Jack or level aircraft
- 2 Q812 Launch or recover aircraft
- 3 Q816 Perform single-point or multipoint aircraft refueling or defueling
- 4 Q817 Position or remove aircraft chocks or pins
- 5 Q819 Reconfigure aircraft
- 6 Q820 Remove or replace aircraft brakes
- 7 Q821 Remove or replace aircraft gauges
- 8 Q823 Remove or replace aircraft tires
- 9 Q828 Remove or replace hydraulic system components
- 10 Q833 Service aircraft hydraulic systems
- 11 Q835 Service aircraft LOX systems
- 12 Q836 Service aircraft shock struts
- 13 Q837 Service aircraft tires
- 14 Q838 Tie down aircraft
- 15 Q839 Tow aircraft
- 16 Q844 Walk wings or tails during aircraft towing operations

0015 ST0183 Inspection Docks

- 1 G259 Perform phase inspections of uninstalled engines
- 2 I492 Perform isochronal inspections of installed engines
- 3 I494 Perform phase inspections of installed engines
- 4 Q813 Perform aircraft inspections, such as phase or isochronal

0016 ST0081 Depot Level Repair

- 1 G321 Remove or replace oil metering jets
- 2 G341 Remove or replace turbine rotors
- 3 K524 Apply protective coatings to engines or engine parts
- 4 K526 Assemble or disassemble compressor units
- 5 K527 Assemble or disassemble engine actuators
- 6 K528 Assemble or disassemble engine bleed valves
- 7 K531 Assemble or disassemble turbine unit assemblies
- 8 K537 Blend engine turbine blades
- 9 K538 Clean and inspect engine bearings
- 10 K539 Clean and inspect engine oil seals
- 11 K547 Inspect compressor modules
- 12 K551 Inspect engines removed from storage
- 13 K554 Inspect oil metering jets
- 14 K569 Operationally check fuel manifolds

0016 ST0081 Depot Level Repair (Continued)

- 15 K570 Operationally check fuel nozzles
- 16 K577 Prepare QEC kits for storage
- 17 K578 Prepare shipping containers for storage
- 18 K579 Rebuild engine gearboxes
- 19 K582 Remove or replace compressor blades
- 20 K583 Remove or replace compressor modules
- 21 K584 Remove or replace engine compressors
- 22 K585 Remove or replace engine stator vanes
- 23 K592 Remove or replace turbine modules
- 24 K593 Remove or replace turbine nozzles
- 25 K594 Remove or replace turbine rotor blades
- 26 K595 Remove or replace turbine unit assemblies
- 27 K597 Repair engine combustion sections
- 28 K598 Repair engine fuel manifolds
- 29 K599 Repair engine fuel nozzles
- 30 K600 Repair engine gearboxes
- 31 K601 Repair engine plumbing
- 32 K602 Repair engine stator vanes
- 33 K603 Repair engine accessories or components
- 34 K604 Repair turbine sections

0017 ST0203 Test Cell

- 1 G234 Inspect vibration analyzers prior to use
- 2 G239 Maintain aircraft noise suppressors or hush houses
- 3 G241 Operate aircraft noise suppressors or hush houses
- 4 G262 Perform vibration analyses
- 5 G344 Remove or replace vibration system components
- 6 G375 Treat engine test facilities for corrosion
- 7 M674 Analyze engine operation data during test cell runs
- 8 M677 Compute engine parameters on test cell engines
- 9 M678 Connect or disconnect test cell throttle-to-engine fuel controls
- 10 M679 Inspect engines before and after installation in test cells
- 11 M680 Inspect test cell support equipment
- 12 M681 Inspect test cells
- 13 M682 Install and position thrust beds for engine operations
- 14 M683 Maintain test cell support equipment
- 15 M684 Maintain test cells
- 16 M685 Operate test cells
- 17 M686 Operationally check engines installed on test cells
- 18 M692 Postoperationally check engines in test stands
- 19 M693 Preoperationally check engines in test stands
- 20 M694 Record instrument readings during engine block testing
- 21 M695 Remove or replace engines in test stands

0017 ST0203 Test Cell (Continued)

- 22 M696 Remove or replace test cell adapter kits
- 23 M697 Service test cell fluid tanks
- 24 M698 Stow engine test beds

0018 ST0147 CAMS

- 1 R846 Access core automated maintenance system (CAMS) menus and data screens
- 2 R847 Analyze CAMS data
- 3 R848 Change CAMS performing workcenter codes
- 4 R849 Change CAMS workcenter event narratives
- 5 R850 Change equipment maintenance discrepancies in CAMS
- 6 R851 Conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance
- 7 R852 Conduct CAMS interface with base supply
- 8 R853 Conduct CAMS training
- 9 R854 Conduct CAMS training status inquiries
- 10 R855 Conduct CAMS uncompleted maintenance event listings
- 11 R856 Correct CAMS errors noted during daily verification process
- 12 R857 Create CAMS job flow packages
- 13 R858 Defer equipment maintenance records in CAMS
- 14 R859 Document maintenance actions in CAMS
- 15 R860 Establish CAMS historical reports
- 16 R861 Implement CAMS workcenter training programs
- 17 R862 Initiate deficiency or service reports in CAMS
- 18 R863 Initiate equipment maintenance discrepancies in CAMS
- 19 R864 Initiate maintenance personnel records in CAMS
- 20 R865 Input supply data in CAMS
- 21 R866 Load part numbers or serial numbers in CAMS
- 22 R867 Schedule CAMS training
- 23 R868 Start or stop CAMS job following events
- 24 R869 Track CAMS job following events
- 25 R870 Track serially controlled items in CAMS
- 26 R871 Update CAMS historical reports
- 27 R872 Update CAMS personnel data files
- 28 R873 Verify accuracy of CAMS daily inputs

0019 ST0129 Nonpowered Equipment Maintenance

- 1 P784 Adjust engine trailer brakes
- 2 P785 Adjust trailer assemblies
- 3 P786 Assemble or disassemble engine trailer parking brake assemblies
- 4 P787 Assemble or disassemble engine trailer wheel and hub assemblies
- 5 P788 Clean and pack engine trailer wheel bearings
- 6 P789 Clean and pack support equipment wheel bearings, other than engine trailer wheel bearings

0019 ST0129 Nonpowered Equipment Maintenance (Continued)

- 7 P790 Clean engine trailers or stands
- 8 P791 Inspect and service engine trailer hydraulic systems
- 9 P792 Inspect and service engine trailer tires
- 10 P793 Inspect nonpowered support equipment, other than engine-related
- 11 P794 Inspect pylon mounted engine hoists
- 12 P795 Lubricate engine hoist assemblies
- 13 P796 Maintain inspection status of nonpowered support equipment
- 14 P797 Operationally check engine installation/removal trailers
- 15 P798 Operationally check pylon mounted engine hoists
- 16 P799 Paint and mark nonpowered engine support equipment
- 17 P800 Perform front-end alignment of engine trailers
- 18 P801 Perform periodic inspections of general support equipment
- 19 P802 Remove or replace engine trailer parking brake assembly components
- 20 P803 Remove or replace hydraulic pumps
- 21 P804 Remove or replace lift cylinders on engine installation/removal trailers
- 22 P806 Remove or replace selector valves
- 23 P807 Remove or replace trailer assemblies
- 24 P808 Remove or replace trailer rails
- 25 P809 Remove or replace wheel cylinders

0020 ST0207 APU/SGT Repair

- 1 N700 Analyze APU or SGT engine operation data during test stand runs
- 2 N701 Assemble or disassemble APUs or SGTs
- 3 N702 Inspect APU or SGT engine portable test stands
- 4 N704 Maintain APU or SGT engine portable test stands
- 5 N705 Operate APUs or SGTs on test stands
- 6 N706 Operate gas turbine compressor (GTC)/APU analyzers
- 7 N711 Preserve or depreserve APUs or SGTs
- 8 N715 Remove or replace APUs or SGTs on portable test stands
- 9 N718 Test APU or SGT engine fuel nozzles
- 10 N719 Test or repair APU or SGT engine centrifugal switch assemblies

0021 ST0440 F108 Engine Maintenance

- 1 G343 Remove or replace VBV components
- 2 G357 Rig VBV systems
- 3 G415 Troubleshoot VBV systems
- 4 I486 Operationally check power management control (PMC) systems
- 5 I500 Remove or replace PMC system components
- 6 I507 Troubleshoot PMC systems

0022 ST0365 First-Line Supervisors

- 1 A1 Assign maintenance and repair work
- 2 A2 Assign personnel to duty positions
- 3 A5 Coordinate work on engine components with appropriate agencies
- 4 A8 Determine work priorities
- 5 A17 Establish performance standards for subordinates
- 6 A20 Plan or schedule work assignments
- 7 A21 Plan or schedule work priorities
- 8 B31 Counsel personnel on personal or military-related matters
- 9 B47 Interpret policies, directives, or procedures for subordinates
- 10 C63 Conduct performance feedback worksheet sessions
- 11 C70 Evaluate personnel for compliance with performance standards or TOs
- 12 C80 Inspect personnel for compliance with military standards
- 13 C84 Write enlisted performance reports
- 14 C85 Write recommendations for awards and decorations

0023 ST0363 Training Managers

- 1 D88 Annotate training records
- 2 D93 Conduct OJT
- 3 D96 Counsel trainees on training progress
- 4 D97 Determine training requirements
- 5 D105 Evaluate personnel for training needs
- 6 D106 Evaluate progress of trainees
- 7 D109 Maintain training records, charts, or graphs

0024 ST0190 Superintendents

- 1 A3 Assign sponsors for newly assigned personnel
- 2 A6 Determine logistics requirements, such as space, personnel, or equipment
- 3 A7 Determine publication requirements
- 4 A10 Develop inspection procedures
- 5 A13 Develop self-inspection programs
- 6 A14 Develop work methods
- 7 A22 Plan safety or security programs
- 8 A24 Schedule leaves
- 9 A26 Schedule personnel for temporary duty (TDY) assignments
- 10 A27 Write job or position descriptions
- 11 B28 Adjust daily maintenance plans to meet operational commitments
- 12 B30 Conduct supervisory orientations of newly assigned personnel
- 13 B38 Direct utilization or maintenance of equipment
- 14 B41 Implement safety or security programs
- 15 B42 Implement self-inspection programs
- 16 B45 Implement work methods
- 17 C61 Analyze workload requirements
- 18 C69 Evaluate maintenance or use of workspace, equipment, or supplies
- 19 C71 Evaluate personnel for promotion, demotion, or reclassification

0024 ST0190 Superintendents (Continued)

- 20 C72 Evaluate safety or security programs
- 21 C75 Evaluate work schedules
- 22 C77 Indorse enlisted performance reports
- 23 D89 Assign on-the-job training (OJT) trainers

0025 ST0102 Quality Assurance Inspections

- 1 C60 Analyze recurring troubles on equipment identified by deficiency or service reports
- 2 C65 Evaluate causes of mission operational discrepancies
- 3 C66 Evaluate equipment modification data
- 4 C67 Evaluate inspection report findings
- 5 C73 Evaluate suggestions
- 6 C74 Evaluate TO improvement reports
- 7 C81 Investigate accidents or incidents
- 8 E142 Participate in predock or postdock meetings
- 9 E143 Participate in time compliance technical order (TCTO) meetings, other than TCTO kit reconciliation meetings
- 10 F155 Coordinate deficiency or service reports with appropriate agencies
- 11 F156 Coordinate quality assurance problems with maintenance personnel
- 12 F157 Evaluate in-process maintenance
- 13 F158 Evaluate safety procedures
- 14 F161 Perform activity inspections, such as self-inspections or quality assessment programs
- 15 F165 Process dropped object reports
- 16 F166 Review engine deficiency, service, or status reports
- 17 F168 Review unsatisfactory condition reports (UCRs)

0026 ST0164 Tool Room

- 1 E118 Cycle torque wrenches
- 2 E119 Dress or resurface tools
- 3 E124 Inventory equipment or supplies
- 4 E125 Inventory special tools, such as consolidated tool kits (CTKs) and toolroom chits
- 5 E126 Issue special tools
- 6 E144 Perform inspections of special tools
- 7 E145 Perform shift security checks of tool cribs

0027 ST0093 Supply/Equipment

- 1 A4 Coordinate calibration of special tools or test equipment with Precision Measurement Equipment Laboratory (PMEL)
- 2 B44 Implement supply procedures
- 3 B51 Review test equipment calibration schedules
- 4 E127 Maintain bench stock listings
- 5 E128 Maintain due-in-from-maintenance (DIFM) transaction rosters
- 6 E129 Maintain D04, D18, D19, and M30 rosters
- 7 E130 Maintain equipment control listings (ECLs)

0027 ST0093 Supply/Equipment (Continued)

- 8 E131 Maintain hazardous material areas
- 9 E133 Maintain microfiche or federal logistics (FEDLOG) files
- 10 E134 Maintain property custodian authorization/custody receipt listings (CA/CRLs)
- 11 E136 Maintain special tools calibration records
- 12 E138 Monitor hazardous communications (HAZCOM) programs
- 13 E139 Monitor hazardous waste programs
- 14 E141 Monitor precious metals programs
- 15 E147 Process damaged tools for distribution or replacement
- 16 E148 Process DIFM items
- 17 E149 Process or package special tools for shipment or deployment
- 18 E150 Review and update PMEL listings
- 19 E152 Validate bench stock listings
- 20 E153 Verify mission capability (MICAP) conditions

0028 ST0043 Resident Course/FTD Instruction

- 1 D87 Administer or score tests
- 2 D90 Assign resident course instructors
- 3 D92 Conduct field training detachment (FTD) courses
- 4 D94 Conduct resident course classroom training
- 5 D95 Conduct training conferences or briefings
- 6 D99 Develop new equipment training programs
- 7 D100 Develop performance tests
- 8 D103 Establish study reference files
- 9 D113 Verify accuracy of training modules
- 10 D114 Write test questions
- 11 D115 Write training reports

0029 ST0542 JFS and CGB Repair

- 1 K523 Analyze JFS and CGB operation data during test stand runs
- 2 K536 Bench check JFSs
- 3 K546 Inspect CGB and associated components
- 4 K553 Inspect JFSs
- 5 K571 Operationally check JFSs or CGBs
- 6 K581 Remove or replace AMADs in AMAD spin testers
- 7 K588 Remove or replace JFSs and CGBs on portable test stands
- 8 K605 Spin test AMADs
- 9 K608 Test JFS fuel nozzles

0030 ST0446 "B" Shred Flightline Engine Maintenance

- 1 R848 Change CAMS performing workcenter codes
- 2 R849 Change CAMS workcenter event narratives
- 3 R850 Change equipment maintenance discrepancies in CAMS

0030 ST0446 "B" Shred Flightline Engine Maintenance (Continued)

4 R851 Conduct CAMS delayed discrepancies inquiries prior to, during, or after scheduling maintenance
5 R855 Conduct CAMS uncompleted maintenance event listings

0031 ST0417 General Propeller Maintenance

1 H418 Adjust beta schedules on Hamilton Standard turbopropellers
2 H419 Adjust feather valve switches
3 H420 Adjust index levers on valve housing covers
4 H421 Adjust mechanical RPMs
5 H422 Adjust pressure cut out backup switches
6 H423 Adjust propeller blade angles
7 H424 Adjust pulse generator clearances
8 H425 Adjust reverse torque
9 H430 Drain hydraulic oil from propeller components
10 H431 Index propeller blades to pitch change mechanisms
11 H432 Inspect propellers or related components
12 H433 Interpret propeller wiring or schematic diagrams
13 H434 Operationally check propellers, other than on test cells
14 H436 Perform static checks of propeller blade angles
15 H437 Remove or replace auxiliary feather motors
16 H440 Remove or replace dome shells
17 H441 Remove or replace drive bracket assemblies or adapter stop tangs
18 H442 Remove or replace engine NTS linkages
19 H443 Remove or replace feather valve switches
20 H444 Remove or replace front spinner cones (noses)
21 H445 Remove or replace low-pitch stop lever assemblies
22 H446 Remove or replace negative torque switches
23 H447 Remove or replace pitch lock regulators
24 H448 Remove or replace pressure cutout backup switches
25 H449 Remove or replace propeller anti-icing afterbodies
26 H450 Remove or replace propeller brush blocks
27 H452 Remove or replace propeller linkage rod ends
28 H453 Remove or replace propeller system electrical conduits
29 H455 Remove or replace pulse generators
30 H457 Remove or replace synchrophasers
31 H458 Remove or replace valve housings
32 H461 Rework propeller blade nicks, burrs, or scratches
33 H462 Rig mechanical linkages from propeller governor controls to coordinators
34 H463 Rig valve housings
35 H465 Torque propellers on engine shaft
36 H466 Troubleshoot feather valve switches
37 H467 Troubleshoot pressure cutout backup switches
38 H468 Troubleshoot propeller anti-icing systems
39 H469 Troubleshoot propeller deicing systems
40 H470 Troubleshoot propeller hydraulic oil systems

0031 ST0417 General Propeller Maintenance (Continued)

- 41 H471 Troubleshoot propeller NTS systems
- 42 H472 Troubleshoot propeller synchrophaser systems
- 43 I487 Operationally check synchrophasors
- 44 I488 Operationally check valve housings
- 45 I493 Perform low-pitch stop checks
- 46 J509 Adjust NTS system components
- 47 J510 Debrief flight crews or ground crews to determine propeller malfunctions
- 48 J512 Operationally check fuel governing systems
- 49 J513 Operationally check percent of RPM
- 50 J514 Operationally check pitch locks
- 51 J515 Operationally check propeller anti-icing or deicing systems
- 52 J516 Operationally check propeller torque
- 53 J517 Perform ground operational checks of NTS systems
- 54 J519 Perform propeller -6 inspections
- 55 J520 Remove or replace propellers on aircraft
- 56 J521 Service propeller systems
- 57 J522 Troubleshoot propeller bindings

0032 ST0296 In-Shop Propeller Maintenance

- 1 H427 Clean propeller system hydraulic oil filters
- 2 H428 Clean propellers or related components, other than hydraulic oil filters
- 3 H454 Remove or replace propeller system hydraulic oil filters
- 4 H456 Remove or replace pump housings
- 5 H459 Repair cuffs, afterbodies, or spinners
- 6 H464 Spray paint propeller tips or blade data sections
- 7 J511 Dynamically balance propellers
- 8 J518 Perform isochronal inspections on propellers
- 9 L613 Adjust low-pitch stop lever assemblies
- 10 L617 Apply preservatives to propellers or propeller components
- 11 L618 Assemble or disassemble brush block assemblies
- 12 L619 Assemble or disassemble dome assemblies
- 13 L620 Assemble or disassemble pump housings
- 14 L621 Assemble or disassemble valve housings
- 15 L622 Attach or remove inboard or outboard test unit oil lines
- 16 L623 Balance propellers
- 17 L629 Check feather angle settings
- 18 L630 Check feather pressures
- 19 L631 Check propeller blade angles
- 20 L632 Check propeller blade backlashes
- 21 L633 Crate or uncrate propellers
- 22 L634 Install deicer boots
- 23 L635 Install dome preformed packings
- 24 L636 Install microadjusting rings or blade index rings
- 25 L637 Install propeller blade teflon strips
- 26 L638 Install propeller hub preformed packings

0032 ST0296 In-Shop Propeller Maintenance (Continued)

- 27 L640 Leak check propeller assemblies
- 28 L641 Leak test pitch locks and low pitch stops
- 29 L642 Maintain hydraulic propeller test units
- 30 L644 Measure propeller parts for bolt stretch
- 31 L645 Measure propeller parts for wear
- 32 L646 Purge air from tester systems
- 33 L648 Remove or replace bulkhead assemblies
- 34 L649 Remove or replace deicer contact ring assemblies
- 35 L652 Remove or replace propeller blade bearing assemblies
- 36 L653 Remove or replace propeller blade deicing brush block assembly components
- 37 L654 Remove or replace propeller blade gear segments
- 38 L655 Remove or replace propeller blade microadjusting rings or blade index rings
- 39 L656 Remove or replace propeller blade packings
- 40 L657 Remove or replace propeller blade slip ring assemblies
- 41 L658 Remove or replace propeller blades in hubs
- 42 L659 Remove or replace propeller control assemblies
- 43 L660 Remove or replace propellers on assembly stands
- 44 L661 Remove or replace rear spinners
- 45 L662 Remove or replace rotating pitch lock ratchets
- 46 L664 Solder propeller brush block assemblies
- 47 L665 Test low-pitch stop lever assemblies
- 48 L666 Test pitch lock cam out actions
- 49 L667 Test pitch lock regulators
- 50 L668 Test propeller control system components
- 51 L669 Test propellers
- 52 L670 Test reverse pressures
- 53 L671 Test surge valve flight idle internal flow and leakage-in-reverse

0033 ST0135 Propeller Depot Maintenance

- 1 L612 Adjust gear preloads
- 2 L614 Adjust propeller governors
- 3 L615 Adjust servo valves, other than stop levers
- 4 L616 Adjust stop lever servo valves
- 5 L624 Bench check feather valve switches
- 6 L625 Bench check negative torque switches
- 7 L626 Bench check pressure cut out backup switches
- 8 L627 Bench check solenoids or solenoid valves
- 9 L628 Bench check synchrophasors
- 10 L639 Lap propeller parts, bases, or covers
- 11 L643 Measure propeller blade lengths
- 12 L647 Remove or replace beta feedback shafts and bushings
- 13 L650 Remove or replace feather valves
- 14 L651 Remove or replace propeller blade balance plugs
- 15 L663 Remove or replace valve housing cams or assemblies

- 1 B49 Participate in engine non-mission capable supply (ENMCS) meetings
- 2 L672 Test unfeather pressures
- 3 L673 Test valve housings
- 4 O724 Annotate TCTO records
- 5 O725 Conduct TCTO meetings
- 6 O727 Coordinate OAP records with appropriate agencies
- 7 O728 Coordinate time change items with aircraft plans and scheduling
- 8 O729 Establish automated engine history files
- 9 O731 Forecast time change replacement items
- 10 O732 Initiate data base error variance corrections
- 11 O733 Initiate engine receiving or shipping reports
- 12 O735 Initiate message reports relating to engine status
- 13 O736 Initiate supply assistance or difficulty letters
- 14 O737 Initiate tracer action on nonreceipt of engines
- 15 O738 Input in-flight data information using ground station units
- 16 O739 Load engine data tapes into engine data bases
- 17 O740 Load engine identification numbers into master ID files
- 18 O741 Maintain cannibalization log for serially controlled items
- 19 O742 Maintain engine deficiency, service, or status reports
- 20 O743 Maintain engine location or status files
- 21 O744 Maintain engine master roster listings
- 22 O745 Maintain engine trim records
- 23 O746 Maintain engine, propeller, QEC kit, or afterburner historical records
- 24 O747 Maintain TCTO jacket files
- 25 O748 Maintain time change suspense files
- 26 O749 Monitor time change and inspection requirements
- 27 O750 Participate in TCTO kit reconciliation meetings
- 28 O751 Perform flight line data analyses or diagnostic checks
- 29 O752 Post spare engine status boards
- 30 O753 Prepare consolidated engine management system (CEMS) reports
- 31 O754 Prepare engine conditioning management program (ECMP) reports
- 32 O755 Prepare engine reconciliation reports
- 33 O756 Prepare engine records for transfer
- 34 O757 Prepare shipping container reports
- 35 O758 Prepare 6-month engine change forecasts
- 36 O759 Process engine account transfers
- 37 O760 Process QEC kit turn-ins or issues
- 38 O761 Reconcile computer rejects
- 39 O763 Report maintenance or diagnostic check requirements to flightline personnel for resolution
- 40 O764 Review engine critical parts listings
- 41 O765 Review OAP records
- 42 O766 Schedule engines or engine modules for repair
- 43 O767 Schedule QEC kits for repair
- 44 O768 Track engine removals or installations at transient locations
- 45 O769 Track MICAP supply status

0034 ST0046 Engine Management (Continued)

- 46 O770 Track overdue, routine, or redcap oil samples
- 47 O771 Track repair of engines or engine modules
- 48 O772 Update automated engine history records
- 49 O773 Update automated engine inventory, operating time, or reconciliation reports
- 50 O774 Update automated engine performance or maintenance data
- 51 O775 Update automated engine removal or installation data
- 52 O776 Update automated engine time change and inspection records
- 53 O777 Update automated ground station units
- 54 O778 Update automated propeller history records
- 55 O779 Update automated TCTO status changes
- 56 O780 Upload TEMS computers
- 57 O781 Verify documentation of repaired engines or engine modules
- 58 O782 Verify inclusion of transfer report and automated history report with engine shipments
- 59 O783 Verify receipt of TCTO changes

0035 ST0166 CUT

- 1 Q824 Remove or replace communication/navigation (COMM/NAV) system components
- 2 Q825 Remove or replace electroenvironmental system components
- 3 Q826 Remove or replace flight control surfaces
- 4 Q827 Remove or replace guidance and control system components
- 5 Q840 Troubleshoot COMM/NAV systems
- 6 Q841 Troubleshoot electroenvironmental systems
- 7 Q842 Troubleshoot guidance and control systems
- 8 Q843 Troubleshoot hydraulic systems

APPENDIX C

EXAMPLES OF AIRCRAFT ENGINES MAINTAINED ACROSS CAREER LADDER CLUSTERS AND JOBS (MEMBERS PERFORMING)

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APPRENTICE F100 MAINTENANCE JOB (N=45)	FLIGHT LINE ENGINE MAINTENANCE CLUSTER (N=166)	IN TEST SHOP CLUSTER (N=126)	IN TEST CLUSTER (N=97)	GENERAL ENGINE MAINTENANCE CLUSTER (N=247)	GENERAL TURBO- PRO JOB (N=63)
11001	31	242	84	156	0
11002	3	1	117	14	57
11003	13	12	256	60	6
11004	4	6	123	32	0
11005	0	0	0	232	0
11006	2	9	220	38	38
11007	3	0	99	43	43
11008	0	0	32	0	62
11009	0	0	60	12	125
11010	0	31	98	37	37
11011	0	0	0	116	76
11012	0	0	0	51	0
11013	0	0	36	126	0
11014	0	0	26	321	0

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